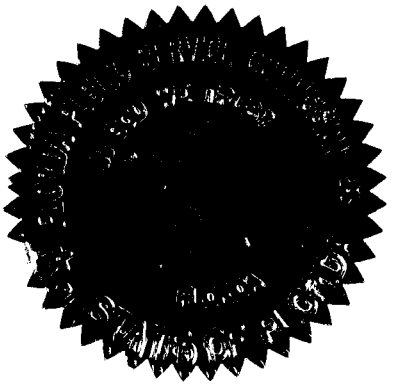
BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of	:	**DOCKET NO. 990325-EI**
Petition of Gulf Power Company to determine need for proposed electrical power plant in Bay County.	:	



VOLUME 1

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PROCEEDINGS: **HEARING**

BEFORE: CHAIRMAN JOE GARCIA
COMMISSIONER J. TERRY DEASON
COMMISSIONER SUSAN F. CLARK
COMMISSIONER JULIA L. JOHNSON
COMMISSIONER E. LEON JACOBS, JR.

DATE: **Monday, June 7, 1999**

TIME: Commenced at 10:35 a.m.

PLACE: Betty Easley Conference Center
Room 152
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: JOY KELLY, CSR, RPR
Bureau Chief, Reporting
Florida Public Service Commission

APPEARANCES:

RICHARD D. MELSON, Hopping Green Sams & Smith, P. A, Post Office Box 6526, Tallahassee, Florida 32314; **JEFFREY A. STONE** and **RUSSEL BADDERS**, Beggs & Lane, 700 Blount Building, 3 West Garden Street, Post Office Box 12950, Pensacola, Florida 32576-2950, appearing on behalf of **Gulf Power Company.**

GAIL KAMARAS, Legal Environmental Assistance Foundation, 1114 Thomasville Road, Suite E, Tallahassee, Florida 32303, appearing on behalf of **Legal Environmental Assistance Foundation (LEAF).**

GRACE A. JAYE, Florida Public Service Commission, Division of Legal Services, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0870, appearing on behalf of the **Commission Staff.**

I N D E X

WITNESSES

EXHIBITS

P R O C E E D I N G S

(Hearing convened at 10:35 a.m.)

CHAIRMAN GARCIA: Okay. Counsel, will you read the notice?

MS. JAYE: Pursuant to notice issued March 23rd, 1999, this time and place have been set for public hearing in Docket No. 990325-EI, petition by Gulf Power Company to determine need for proposed electrical power plant in Bay County.

CHAIRMAN GARCIA: Okay. We'll take appearances.

MR. STONE: Thank you, Commissioner. Good morning. I'm Jeffry A. Stone of the law firm Beggs & Lane, and with me is Russell A. Badders. And we're here on behalf of Gulf Power Company. I'll get Mr. Melson to give his appearance.

MR. MELSON: Richard Melson of the law firm of Hopping Green Sams & Smith P.A. also appearing on behalf of Gulf Power Company.

MS. KAMARAS: Gail Kamaras, Legal Environmental Assistance Foundation.

CHAIRMAN GARCIA: Okay.

MS. JAYE: Grace A. Jaye on behalf of Commission Staff.

CHAIRMAN GARCIA: Very good.

This is going to be difficult trying to work with one mike. What we will do -- what I assume, Robby, is that we can take one of the mikes up here from the Commissioners and give it to LEAF.

COMMISSIONER CLARK: How about yours?

CHAIRMAN GARCIA: That would be perfect. You have no idea how much that would please me. We'll have them work with that.

COMMISSIONER CLARK: I was just kidding. (Laughter)

CHAIRMAN GARCIA: So anyway, got to be careful around Robby. (Laughter)

We're going to be recording this. Obviously, no Internet live transmission is going to be occurring but we're going to tape this and this will be played over the Internet. Obviously no one is going to be participating via phone.

Ms. Jaye, are there any preliminaries?

MS. JAYE: Yes, Mr. Chairman, there are some preliminaries. We've begun adding a new issue in the dockets where there's confidential information, and in this docket it is called Issue 9, and it deals with how the Request for Confidential Classification has been addressed in this docket. And I wanted to go ahead and take care of that up front and let everyone

know there are outstanding Notices of Intent to Request Confidential Classification, and I believe that formal requests were filed on June 3rd, 1999, for those items. And those items are the Late-filed Deposition Exhibit Nos. 1, 2 and 4 from the deposition of Witness Pope, and Late-filed Deposition Nos. 1 and 2 from the deposition of Witness Burke.

CHAIRMAN GARCIA: Okay. Why don't you ask the question --

COMMISSIONER CLARK: Why are we putting that as an issue? Is it just sort of a bookkeeping thing to make sure that we handle them before the docket is closed?

MS. JAYE: Yes, Commissioner.

CHAIRMAN GARCIA: Very good. All right. That said, are we ready -- does the Company have any preliminary? LEAF? (No response)

Very good. None of these witnesses are stipulated in?

MR. MELSON: At this point, that's correct.

CHAIRMAN GARCIA: Okay. Ms. Jaye, I'm going to ask you a favor; if you could keep my exhibit list?

COMMISSIONER CLARK: I'll do it.

CHAIRMAN GARCIA: Okay. We'll start. Call your first witness.

MR. MELSON: Would you like to swear all the witnesses in?

CHAIRMAN GARCIA: That might be a good idea. Will all the witnesses please rise.

(Witnesses collectively sworn.)

MR. MELSON: Chairman Garcia, before we call the first witness, we'd like to ask that you identify the Need Study that was filed in this docket.

CHAIRMAN GARCIA: I'm sorry?

MR. MELSON: Before we start with the first witness, we'd ask that you identify the Need Study that was filed in this docket as Exhibit 1. And along with that Need Study there was a Revised Page 74 and a two-page supplement. All of our witnesses are sponsoring various portions of this Need Study and we'd like to identify it up front, and then we will move it into evidence at the conclusion of all of our testimony.

CHAIRMAN GARCIA: That will be identified as Exhibit 1.

(Exhibit 1 marked for identification.)

CHAIRMAN GARCIA: Before we go any further, I wanted to point out we have some visitors here. We have Andrew Spahn from USEA, and Commissioner Eduardo Quincoces, who is from Santo Domingo, the Dominican

Republic. They are both here to monitor this hearing and other things we do to try to learn some valuable lessons. So let's hope we are all on our best behavior.

Is there anything else, Mr. Melson?

MR. MELSON: No, sir.

CHAIRMAN GARCIA: Okay.

MR. STONE: Commissioner, we'll call our first witness, Mr. Robert G. Moore.

CHAIRMAN GARCIA: Okay.

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ROBERT G. MOORE

was called as a witness on behalf of Gulf Power Company and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. STONE:

Q Mr. Moore, would you please state your name and your position with Gulf Power Company for the record?

A Robert G. Moore. I'm vice president of Generation and Transmission for Gulf Power Company.

Q Mr. Moore, did you prefile 11 pages of direct testimony in this docket?

A Yes, I did.

Q Prior to this hearing today, there was a Revised Page 6 to your original Direct Testimony. Did you also submit a Revised Page 6?

A Yes, I did.

Q Attached to your testimony were two schedules, 1 and 2, that were marked as part of RGM-1. Was that exhibit prepared by you or at your direction?

A Yes, it was.

MR. STONE: We would ask that Mr. Moore's testimony be inserted into the record as though read.

CHAIRMAN GARCIA: Very well.

MR. STONE: Could we have an exhibit number for RGM-1.

CHAIRMAN GARCIA: Exhibit number 2.

(Exhibit 2 marked for identification.)

Q **(By Mr. Stone)** Mr. Moore, did you also sponsor Sections 1.9, 9.2 and 9.3 of the Need Study document that has already been identified as Exhibit 1 in this proceeding?

A Yes, I did.

Q As part of that Need Study, there was a revised Page 74 as mentioned by Mr. Melson earlier and that is part of one of those sections; is that correct?

A Yes, it is.

Q So you are sponsoring those three sections as amended by the revised page; is that correct?

A Yes, that's correct.

Q Mr. Moore, did you also cause to be filed three pages of Supplemental Direct Testimony in proceeding?

A Yes, I did.

Q Attached to that Supplemental Direct Testimony was there also is a Schedule 3 that was marked as RGM-2?

A Yes, there was.

Q And that was prepared by you or at your direction?

A That's correct.

MR. STONE: We would ask an exhibit number be assigned to RGM-2.

CHAIRMAN GARCIA: That will be Exhibit No. 3.

(Exhibit 3 marked for identification.)

Q **(By Mr. Stone)** Do you have any corrections to your supplemental testimony?

A No, sir, I do not.

Q If I were to ask you the questions contained both in your Direct and Supplemental Direct, your answers would be the same?

A Yes, they would.

MR. STONE: We've already inserted his direct testimony. We'd ask that his Supplemental Direct Testimony be inserted into the record as though record.

CHAIRMAN GARCIA: Very well.

GULF POWER COMPANY

Before the Florida Public Service Commission
Direct Testimony of
Robert G. Moore
Docket No. 990325-EI
Date of Filing: April 5, 1999

Q. Please state your name, business address and occupation.

A. My name is Robert G. Moore, and my business address is One Energy Place, Pensacola, Florida 32520. I am Vice President of Power Generation and Transmission for Gulf Power Company.

Q. Please summarize your educational and professional background.

A. I graduated from the University of Alabama in 1973 with a Bachelor of Science degree in Mechanical Engineering. My career began as an engineer at Alabama Power Company following graduation in 1973.

In April of 1978, I transferred to Mississippi Power Company (MPC) as a plant engineer in Power Generation at the Company's Daniel Electric Generating Plant. I progressed through increasing levels of responsibility to become Plant Manager in 1984. Then in January of 1991, I transferred to MPC's Plant Watson in Gulfport where I served as Plant Manager.

In March 1993, I was promoted and transferred to Georgia Power Company as Plant Manager of Plant Bowen located Northeast of Atlanta. As Plant Manager at both Mississippi Power and Georgia Power Companies, I was responsible for all aspects of power plant operations and maintenance.

In July 1997, I was elected to my current position as Gulf Power Company's Vice President of Power Generation and Transmission. In this position, I am responsible for the generation and transmission of electricity and all wholesale bulk power marketing functions. Other areas under my direction are environmental services, system control, fuel procurement, interchange contract administration, and plant construction and engineering.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to explain why the Company believes construction of a combined cycle (CC) unit at Gulf's Smith Plant (Smith Unit 3) is necessary and to affirm the Company's commitment to this project. I will also provide a brief description of the unit and its estimated costs.

Q. Have you prepared an exhibit that contains information to which you will refer in your testimony?

A. Yes. I have an exhibit consisting of 2 schedules to which I will refer. This exhibit was prepared under my supervision and direction. I am also sponsoring Sections 9.1, 9.2, and 9.3 of the Need Study that was filed in this docket.

Counsel: We ask that Mr. Moore's Schedules 1 and 2 be marked as Exhibit 2 (RGM-1).

Q. What is one of your primary responsibilities with regard to Gulf's generating capacity resources?

A. I am the Chief Production Officer for Gulf Power Company. In this role, I am responsible for making sure that the Company has enough generating capacity or purchased power resources to meet its customers' electricity needs. The organization that I direct is responsible for operating and maintaining Gulf's owned capacity and procuring additional resources when it is economic to do so. My organization is also responsible for the planning of the bulk power generation and transmission systems for Gulf Power Company in concert with the other Southern operating companies.

A number of employees at both Gulf Power and Southern Company Services have worked for many months on the evaluation process concerning additional capacity. They have made various status reports on this process during the last year to Gulf's executive management and have, in my opinion, looked at the options from every reasonable perspective. Gulf's executives know that Smith Unit 3 is in the best interests of our customers and are committed to the development of this project.

Q. Would you provide a description of Smith Unit 3?

A. Smith Unit 3 will be what is commonly referred to as a 2-on-1 combined cycle unit, using the General Electric "F" Class combustion turbine technology. The unit is comprised of two combustion turbines (CT) whose exhaust gases flow through two separate heat recovery steam generators (HRSGs). On a combined basis, the HRSGs will produce 1,800 psig steam in sufficient quantities to power about 170 megawatts of steam turbine/generator capacity. This provides an average generating capability of 521 MW. As discussed later, when power augmentation is used, the total capability is raised to 540 MW.

Smith Unit 3 will be a highly efficient, state-of-the-art combined cycle generating unit. Because the new unit will be fueled by natural gas, the environmental concerns associated with the project are minimal. Smith Unit 3 is expected to provide the customers of Gulf with many years of low cost, clean energy.

Smith Unit 3 will have a firm supply of natural gas that will come from a new pipeline installation to the Smith Plant. Currently, the Company does not have any plans to provide for a secondary fuel source for this unit because of the expected firmness of the natural gas supply. Since this new natural gas pipeline is to be built and owned by someone other than Gulf, the cost estimate does not include any major gas pipeline costs, but does include connection and metering costs. The pipeline costs are included in the projected cost for natural gas that will be used by the unit.

Smith Unit 3 will be located on the existing generating site approximately 1,000 feet north of the Smith Plant 230 KV substation. The unit's output will reach the Company's transmission grid by means of less than 1,000 feet of 230 KV bus. The existing

transmission system out of Smith Plant is sufficient to handle the unit's output under normal peak operating conditions.

Smith Unit 3 will have an average annual output of 521 megawatts at an efficiency of 6,741 Btu/KWH. The unit will have the capability for power augmentation by steam injection to generate up to 540 megawatts of peaking generation at a reduced efficiency of 7,139 Btu/KWH. Schedule 1 contains the operating characteristics of Smith Unit 3.

Q. What is the projected installed cost of Smith Unit 3?

A. The estimated installed costs for Smith Unit 3, excluding AFUDC and any costs associated with the construction of the natural gas pipeline is $187,252,000. This estimate is based on a combination of actual vendor quotes and refined engineering cost analyses and includes the costs necessary to comply with all applicable environmental regulations. With respect to most of the components that comprise the project cost, this estimate can be considered relatively firm (±10%). Schedule 2 contains a breakdown of the cost estimate.

Q. Would you briefly explain the environmental considerations?

A. Subsequent to filing the Petition for Need Determination before the Commission, the Company will file its Site Certification Application (SCA) with the Florida Department of Environmental Protection under the Florida Electrical Power Plant Siting Act (PPSA). Smith Unit 3 will be operated in compliance with all applicable federal and state environmental laws and regulations. Two principal environmental issues to be considered are air emissions and any thermal impacts due to the discharge of cooling water from Unit 3.

As mentioned above, Smith Unit 3 will be fueled by natural gas. Therefore, the only major air emission issue is that of NO_x. Gulf is pursuing an air emission strategy that will reduce NO_x emissions from one of the existing Smith generating units, leading to a net reduction in total NO_x emissions for the entire plant even after Smith Unit 3 is operational. However, in an abundance of conservatism, the cost estimate used in the evaluations of Smith Unit 3 included the capital and O&M costs of a Selective Catalytic Reduction (SCR) system if needed to control NO_x emissions beyond levels achieved through this strategy.

Condenser cooling for Smith Unit 3 will be accomplished by a closed-cycle cooling tower system,

which will minimize cooling water withdrawals and discharge. Make-up water for the closed-cycle cooling system will be withdrawn from the existing once-through cooling water discharge canal that serves existing Smith Units 1 and 2. Blow-down from the cooling tower will be routed to the existing discharge canal, downstream of the make-up structure. The blow-down, which will be taken from the cold side of the cooling tower, will result in a slight decrease in the temperature of the cooling water of the discharge canal compared to current conditions.

The Company believes that Smith Unit 3 will be permitted for construction and operation under the conditions and strategy that Gulf plans to propose in its SCA. From an environmental standpoint, the proposed facility will have net positive impacts.

Q. Why does Gulf Power Company need to construct additional generating capacity in 2002?

A. Gulf Power Company's current power purchases expire at the end of the year 2001. The Company's load and energy forecast identifies that Gulf has a capacity need of 427 MW beginning in the summer of 2002 in order to achieve an adequate level of reserves. The

Company has done everything reasonable in order to meet its customers' needs through 2001.

With the identified need beginning in 2002 in mind, the Company has evaluated the options available, performed a test of the market, and has determined that the construction of Smith Unit 3 is the most cost-effective resource choice for Gulf and its customers. Over a 20-year period, Smith Unit 3 will save the Company and its customers at least $90 million compared to the next best alternative. I believe that once the Company has presented its case, this Commission will agree that the Company is making the best choice.

Q. Please describe the role that Gulf's other witnesses will play in this proceeding.

A. The testimony of Margaret D. Neyman and Michael J. Marler will describe the load and energy forecasting process employed by the Company. They will describe how Gulf coordinates its forecasting activities with the other Southern operating companies. They will also present the supply-side and demand-side considerations that ultimately lead to how much customer demand the Company can expect from year to

year. This is one of the primary drivers for the resource planning process.

The testimony of William F. Pope will describe the Company's resource planning process and how it is coordinated with the other Southern operating companies. He will describe many of the steps the Company goes through in order to develop its individual piece of the Southern plan. Mr. Pope will also describe the self-build option evaluations which first indicated that a combined cycle unit at Gulf's existing Smith Plant was the best internal construction choice for Gulf.

The testimony of Maria Jeffers Burke will describe the Company's Request for Proposal (RFP) process and how the analyses of proposals were conducted. Her testimony will show how the various offers compared to the Company's self-build alternative. Ms. Burke will explain the steps taken that ultimately showed that Smith Unit 3 is the most cost-effective option for Gulf's customers.

The testimony of M. W. Howell will bring together all of the various facets of the decision-making process that led the Company to settle on the construction of Smith Unit 3. He will summarize the process that led the Company to determine that Smith

Unit 3 is the most cost-effective choice for the Company and its customers. Mr. Howell will also provide this Commission the consequences of not meeting the June 2002 in-service date.

Q. Does this conclude your testimony?

A. Yes.

GULF POWER COMPANY

Before the Florida Public Service Commission
Supplemental Direct Testimony of
Robert G. Moore
Docket No. 990325-EI
Date of Filing: May 17, 1999

Q. Please state your name and business address.

A. My name is Robert G. Moore, and my business address is One Energy Place, Pensacola, Florida 32520.

Q. Have you previously filed direct testimony in this docket?

A. Yes.

Q. What is the purpose of your supplemental direct testimony?

A. Since the Need Study was filed, Gulf has continued to refine the engineering design for Smith Unit 3 in an effort to achieve the best overall value. The purpose of this testimony is to describe the design changes that Gulf has made, and to update the construction cost estimate for the unit.

Q. Have you prepared an exhibit that contains information on these updates?

A. Yes. I have an exhibit consisting of one schedule that was prepared under my supervision and direction.

Counsel: We ask that Mr. Moore's Schedule 3 be marked as Exhibit 3 (RGM-2).

Q. What changes has Gulf made in the unit's design since the Need Study was filed?

A. Gulf has made changes to the steam fired portion of the combined cycle unit that allow it to produce a higher mass steam flow through the steam turbine.

Q. What is the effect of these changes?

A. As a result of these changes, the summer peak capacity of the unit has increased by 34 MW, from approximately 540 MW to approximately 574 MW. The changes associated with this 6.3% increase in maximum unit capability result in a slight reduction in the average annual output of the unit, from 521 MW to 519 MW. They also result in a slight increase in the average annual heat rate for the unit from 6,741 Btu/KWH to 6,761 Btu/KWH.

Q. Please describe the change in the total installed cost estimate for Smith Unit 3.

A. The total nominal cost estimate for Smith Unit 3 has increased by $9,670,000 to $196,922,000. On a per KW basis, the estimated total nominal cost has decreased from approximately $347/KW to approximately $343/KW. A breakdown of the updated cost estimate is shown on Schedule 3.

Q. Has Gulf analyzed the effect of these design and cost changes on the overall cost-effectiveness of the project?

A. Yes. Our analysis shows that these design changes provide additional benefits to Gulf and its customers. Ms. Burke will provide the details of this analysis. Based on this analysis, we are asking the Commission to find that Gulf has a need for the 574 MW represented by Smith Unit 3, and that this project is the most cost-effective alternative available.

Q. Does this conclude your testimony?

A. Yes.

Q **(By Mr. Stone)** At this time, Mr. Moore, would you please present a summary of your Direct Testimony and your Supplemental Direct Testimony.

A Yes. Good morning, Commissioners.

As the Chief Production Officer for Gulf Power Company, one of my primary responsibilities is to ensure that we have sufficient generation capacity and/or purchased power resources to meet our customers' needs. My organization is responsible for the operation and maintenance of our Gulf-owned facilities as well as procurement of additional resources for our customers. Also, the organization is responsible for the bulk power transmission system and its coordination with Southern operating companies.

A number of employees at Gulf and Southern Company Services have worked several months on the evaluation of this process. In my opinion, they have looked at every reasonable option available. The executives at Gulf know that Smith Unit 3 is in the best interest of our customers, and we feel like that it's a project that we're definitely committed to.

Today Gulf filed a Site Certification Application under the Power Plant Siting Act. This is essential for us to move forward with this project and

have this generation available by June 2002. This unit is commonly referred to as a 2-on-1 combined cycle unit that we use in GE's F Class combustion turbine technologies.

The unit will produce on an annual basis 519 megawatts, and as we will discuss later, in an augmented power load it will produce 574 megawatts. Smith Unit 3 will be a highly efficient state-of-the-art combined cycle technology.

Today we have several people here to testify and to answer your questions and address your concerns. Also here to testify today are Margaret Neyman and Mike Marler. They are here to answer questions and concerns regarding load and energy forecast processes. Also Bill Pope is here to answer questions and concerns regarding our resource planning process and how it is coordinated with the other Southern operating companies. In addition, Maria Burke is here to answer questions regarding our request for proposals and that evaluation. Her testimony will show how these offers compared to the Gulf's self-build option. And finally, Bill Howell is here to address any other facets of this project that led Gulf to the decision for the self-build option Smith Unit 3, and why we feel like it's the most

cost-effective decision for the company and the customers.

That concludes my summary.

MR. STONE: We tender Mr. Moore for cross examination.

COMMISSIONER CLARK: I just have a preliminary question. Why do you call it 2-on-1 where I think -- aren't there two combustion turbines and then two heat recoveries? Is it two plants on one site?

WITNESS MOORE: The call it 2-on-1 because you have two combustion turbines and one steam turbine generator. The two combustion turbines exhaust into two heat recovery generators that supply the steam to one steam turbine generator; hence 2-on-1.

COMMISSIONER CLARK: Okay.

CHAIRMAN GARCIA: Very good.

COMMISSIONER JACOBS: Can I ask as a technical novice, what's the benefit of that? You gain some things by doing that?

WITNESS MOORE: Yes, sir. The primary benefit on a combustion turbine, a lot of heat energy is lost in the exhaust. In this process you take the heat from the exhaust of the combustion turbine, you run that back through a heat recovery boiler and

generate steam, dropping the heat and absorbing -- converting it to steam energy and then you run that through a steam turbine generator. That, in turn, maximizes the efficiencies that we can gain.

COMMISSIONER CLARK: So a heat recovery steam generator is different than heat recovery steam turbine? Is there just one turbine for the steam?

WITNESS MOORE: There's a heat recovery steam generator, in some terms could be called a boiler. The only difference, in this case it's built like a boiler -- it's got tubes with the water in the tubes -- the heat comes from the exhaust of the combustion turbines.

COMMISSIONER CLARK: But there are essentially two steam boilers that then drive one --

WITNESS MOORE: Steam turbine.

COMMISSIONER CLARK: -- one turbine.

WITNESS MOORE: Yes, ma'am.

CHAIRMAN GARCIA: Don't explain it to well to the engineers, to the lawyers because -- (Laughter)

All right.

MR. STONE: We tender him for cross examination.

CHAIRMAN GARCIA: LEAF?

MS. KAMARAS: LEAF has no questions.

MS. JAYE: Staff has no questions.

CHAIRMAN GARCIA: Okay.

COMMISSIONER CLARK: I have one. I wanted you to clarify the cost of the pipeline.

On Page 6 of your testimony you indicate the cost of the pipeline will be carried by somebody else. And then -- wait a minute. I guess it's on Page 5 you say you do not include some costs because the pipeline costs are going to be somebody else's responsibility. And then on 6 it seems like you do include them. Is it just the connection and metering costs that you've included?

WITNESS MOORE: Yes, Commissioner, that's correct.

COMMISSIONER CLARK: What is that cost?

WITNESS MOORE: Commissioner, I don't have the exact number on what that cost is.

COMMISSIONER CLARK: Who would explain why the environmental net impacts are positive if you're adding another plant?

WITNESS MOORE: I can try to address that from a broad perspective, if you'd like.

What we're proposing to do is look at the site as a whole, the existing site, as to coal-fired boilers, and we're adding a third combined cycle unit.

What we're proposing to do is to reduce the total emissions, NOX emissions from the site. In order to do that, we have to go back and make modifications on our existing coal-fired unit to reduce those NOX. Our intent and belief is that we can reduce those NOX on the coal-fired unit enough to more than offset anything that would have been generating on the combined cycle unit.

COMMISSIONER CLARK: Well, then it strikes me that you could do that separately to the coal-fired units regardless of whether you put in a new natural gas plant.

WITNESS MOORE: Yes, ma'am, we could. The only issue that comes to hand is the cost of doing that.

COMMISSIONER CLARK: And by putting another plant there the costs come down?

WITNESS MOORE: The costs don't necessarily come down, it's just a matter we thought it was more prudent to reduce the emissions out of the coal-fired unit since the new unit we're building is gas-fired and will have less NOX emissions than the existing coal-fired unit.

COMMISSIONER CLARK: It doesn't strike me that it's a net positive impact because of the new

facility. It's a positive impact because of what you're doing to existing facilities.

WITNESS MOORE: Yes, Commissioner, that's correct.

COMMISSIONER CLARK: Okay.

COMMISSIONER JACOBS: As I understand it, as a secondary option you've allowed for the catalytic reduction unit?

WITNESS MOORE: Yes, sir.

COMMISSIONER JACOBS: You're just putting in the capital and O&M cost for that?

WITNESS MOORE: Yes, sir, that's correct. We've included that in the numbers to put this proposal together, and in trying to be conservative we felt like it was prudent to go ahead and include that cost at this time.

COMMISSIONER JACOBS: Now, what will be the make-or-break point on that? Will you actually keep that in there for the life of the development? Or if you come to a point where you see your efforts with the coal units are affected and you don't need that unit, what is going to happen then?

WITNESS MOORE: Right now our plan is that that issue is going to be resolved through the Site Certification Application that we filed with the

Florida DEP. They are going to address the issues of the environmental.

COMMISSIONER JACOBS: And so at that point in time you'll make a decision whether or not to follow through with the catalytic unit or not?

WITNESS MOORE: That is correct. Yes.

COMMISSIONER JACOBS: I think the other question I have is the pipeline thing.

Let me just be sure I understand what's happening with the pipeline. You aren't including costs in your -- but you do have some costs included, don't you, for gas delivery?

WITNESS MOORE: In our models. And Maria Burke will be the one to give you the details of that.

COMMISSIONER JACOBS: I'm sorry, who?

WITNESS MOORE: Maria Burke. We have included numbers in the comparisons that include fuel cost.

COMMISSIONER JACOBS: Okay. Very good.

COMMISSIONER DEASON: The NOX limitation, is that a plant or site-specific limitation?

WITNESS MOORE: In this case we're looking at the site as a whole, yes.

COMMISSIONER DEASON: And you've determined that it's more cost-effective to implement NOX

reductions on the coal-fired facilities?

WITNESS MOORE: Yes, sir.

COMMISSIONER DEASON: On Page 8 of your testimony you make reference to the blow-down side, the blow-down which will be taken from the coal side of the cooling tower. And you indicate it will result in a slight decrease in the temperature of the cooling water of the discharge canal compared to current conditions. Could you explain that a little further, please?

WITNESS MOORE: Basically what we want to try to do is the water we need for the condensing process on this new unit, we have got to take it out of the canal. Our plan is to take it out of the discharge, which mean it's already hot. So for us to condense the steam with it, we have to cool that water back down before we run it through the condenser. Once we run it through the condenser, it goes back to the cooling tower and is reused again and again. But blow-down is a means by which we control the level of the water in the cooling tower. The water that flows from the cooling tower through the blow-down is cooler then the actual discharge temperature. Therefore, we think it's going to have a positive impact on the discharge temperature of the canal.

COMMISSIONER DEASON: How do you cool the water -- when you take it from the canal you say you cool it so it can be usable in the process. How do you do that?

WITNESS MOORE: We use mechanical force cooling systems. It is a cooling system that has fan-driven motors on it, and you run this water across a series of trays, and you pretty much oxygenate the water and cools the water down before it's used on Unit 3.

COMMISSIONER DEASON: And the energy required to run that cooling system, that is already calculated in your net output from this plant; is that correct?

WITNESS MOORE: Yes, sir, that's correct.

COMMISSIONER DEASON: And doing this is still the most cost-effective way to address the situation?

WITNESS MOORE: Yes, sir.

COMMISSIONER JACOBS: How significant -- the design improvement -- I don't have the vaguest idea what technically this does but it sounds like what you could do, is you could come back in on the existing design and just add some new features to it. Is that essentially what happens?

WITNESS MOORE: Let me see if I can explain it without getting too bogged down in details.

The existing steam turbine generator, combustion turbines, exhaust into the steam recovery units. What we have actually done, in looking at the efficiencies of this process and working with GE, we found that we had an opportunity to increase the output of the steam turbine generator if we could just increase the steam flows; the volume of steam going through the steam turbine.

COMMISSIONER JACOBS: Going into it.

WITNESS MOORE: Into the steam turbine generator.

COMMISSIONER JACOBS: You have two of them leading into the generator. So if you can increase that volume -- okay.

WITNESS MOORE: And basically what we did, we increased the flow openings going into the steam turbine so we can get more flow through them. And in order to do that, we had to increase some pump sizes and make some additional changes to the heat recovery unit to get the additional steam capacity.

COMMISSIONER JACOBS: And the numbers that you're looking at are net savings?

WITNESS MOORE: Yes, sir.

COMMISSIONER JACOBS: Okay.

CHAIRMAN GARCIA: Any other questions? Mr. Stone?

MR. STONE: No redirect.

CHAIRMAN GARCIA: Very good. Thank you very much.

WITNESS MOORE: Thank you, Commissioner.

MR. STONE: We'd like to move Exhibits 2 and 3 into evidence.

CHAIRMAN GARCIA: Okay. If there's no objection, show them moved in.

(Exhibits 2 and 3 received in evidence.)

MR. BADDERS: Gulf Power would like to call as its next witness a panel consisting of Margaret D. Neyman and Michael J. Marler. These witnesses were previously sworn.

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MARGARET D. NEYMAN
MICHAEL J. MARLER

were called as a panel of witnesses on behalf of Gulf Power Company and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BADDERS:

Q Would each witness please state their name?

A (By Witness Neyman) I'm Margaret D. Neyman.

My business address is One Energy Place, Pensacola, Florida.

A (By Witness Marler) I'm Michael J. Marler and my business address is also One Energy Place, Pensacola, Florida.

Q Did you prefile testimony consisting of ten pages?

A (By Witness Neyman) Yes, we did.

Q Do you have any changes or corrections to that testimony?

A No, we do not.

Q If I were to ask you the same questions today, would each of your answers be the same?

WITNESS NEYMAN: Yes, they would.

WITNESS MARLER: Yes, they would.

MR. BADDERS: Commissioner, we ask that this prefiled testimony be inserted into the record as though read.

CHAIRMAN GARCIA: Okay.

Q **(By Mr. Badders)** Do you have one exhibit marked as MJM-1 which consists of three schedules?

A (By Witness Neyman) Yes, we do.

Q Was this exhibit prepared at your direction or by yourself?

A Yes, it was.

Q Are you also sponsoring Chapters 4 and Appendix B to the Need Study document?

A Yes, we are.

Q Do you have any changes to either the exhibit or your portions of the Need Study document?

A No, we don't.

MR. BADDERS: Commissioner, we ask these exhibits be identified.

CHAIRMAN GARCIA: They are identified as Exhibit 4.

(Exhibit 4 marked for identification.)

GULF POWER COMPANY

Before the Florida Public Service Commission
Direct Testimony of
Margaret D. Neyman and Michael J. Marler
Docket No. 990325-EI
Date of Filing: April 5, 1999

Q. Mrs. Neyman, would you please state your name, business address and occupation?

A. My name is Margaret D. Neyman and my business address is One Energy Place, Pensacola, Florida, 32520. I am employed by Gulf Power Company as the Marketing Services Manager.

Q. Mrs. Neyman, please summarize your educational background and professional experience.

A. I attended Auburn University and graduated with a Bachelor of Science degree in Industrial Engineering in 1980. I began my career in the electric utility industry at Gulf Power Company in 1981 and have held various positions within the company in Corporate Planning, Customer Service, Appliance Sales and Marketing. In my present position, I am responsible for Energy Conservation Cost Recovery (ECCR) filings, pricing, economic evaluations, market research, forecasting and marketing services activities.

Q. Mrs. Neyman, have you previously testified before this Commission?

A. Yes, I have testified for Gulf Power Company in ECCR dockets.

Q. Mr. Marler, would you please state your name, business address and occupation?

A. My name is Michael J. Marler, and my business address is One Energy Place, Pensacola, Florida 32520. I am employed by Gulf Power Company as a Senior Engineer in Marketing Services. I am responsible for development of the customer, energy and peak demand projections.

Q. Please summarize your educational background and professional experience.

A. I graduated from the University of South Alabama in December, 1981 with a Bachelor of Science degree in Electrical Engineering. While attending school, I participated in the Cooperative Education program with Alabama Power Company in Mobile, Alabama. Upon graduation in 1981, I accepted a position with Gulf Power Company in Load Research. In this position, I was responsible for the Cost-to-Serve load research including the sampling plan development, data

collection, analysis and reporting. I was also involved in other load studies designed to evaluate customer energy usage patterns, end-use load studies, and energy efficiency measures. In 1987, I joined the forecasting section. In this position, I have been responsible for development of the Company's short-term customer, energy, base revenue and peak demand projections and coordination with Southern Company Services in development of the long-term projections. I am responsible for dissemination of the forecast to all of the planning areas of the Company as well as the various federal, state and local governmental and regulatory agencies.

Q. Have you prepared an exhibit that contains information to which you will refer in your testimony?

A. Yes. We have an exhibit consisting of 3 schedules to which we will refer. This exhibit was prepared under our supervision and direction. We are also sponsoring Section 4 and Appendix B of the Need Study filed in this docket.

Counsel: We ask that Schedules 1, 2, and 3 be marked for identification as Exhibit 4 (MDN/MJM-1).

Q. What is the purpose of your testimony?

A. Our testimony will describe the load forecasting methodology for Gulf Power Company, the role of conservation programs in the forecast and their effect on the projected growth in system peak demand. Finally, we will provide an overview of the historical forecast accuracy achieved by Gulf's forecasting methodology.

Q. Mrs. Neyman, in your position, what part do you play in the forecasting process?

A. I am responsible for the development of the demand side management (DSM) programs that comprise Gulf's portfolio of conservation initiatives offered to its customers. In this role, I am involved in the program analysis and cost-benefit evaluations that ultimately lead to the selection of DSM programs to be implemented. The programs in Gulf's portfolio offer a wide variety of demand side measures for implementation by its customers. The primary impact of these programs is a reduction in the overall peak demand and energy needs. These reductions are directly reflected in Gulf's load and energy forecast.

Q. Mr. Marler, in your position, what part do you play in the forecasting process?

A. My role is to oversee the development of the customer, energy, and peak demand projections for Gulf. I am specifically responsible for development of the short-term (0-2 year) projections and for interfacing these results with the long-term projections developed by Southern Company Services (SCS) personnel. I work closely with SCS to provide insight and guidance in the development of the long-term projections to ensure the best possible product for use in the Southern electric system (SES) resource planning process.

Q. Could you briefly describe the SES forecasting process in which Gulf Power Company is involved?

A. Gulf Power Company is one of five operating companies of Southern Company, along with Alabama Power, Georgia Power, Mississippi Power and Savannah Electric & Power. Each of the operating companies is responsible for development of customer, energy and peak demand projections for its own system. These projections take into account the latest economic outlook for each of the operating companies as well as the expected impacts of conservation measures

unique to each service area, including programs mandated by state and federal regulatory agencies. The individual operating company forecasts are aggregated to a total SES level to provide the projections necessary to coordinate our planning for the growth of the entire SES.

Q. What approach does Gulf use in preparing its forecasts?

A. Gulf uses a variety of different techniques and methodologies depending on the task at hand. These range from short-term forecasts of customer growth, based primarily on input from Gulf's district marketing personnel, to long-range forecasts of energy sales using sophisticated, state of the art computer models such as REEPS and COMMEND.

Our peak demand forecast is prepared using the Hourly Electric Load Model (HELM). This model uses load data on individual end uses to produce hourly load curves for the entire Gulf system. This approach enables us to analyze the impact of factors such as alternative weather conditions, customer mix changes, fuel share changes, and demand side programs. A more detailed explanation of Gulf's

forecasting process is contained in Chapter 4 and Appendix B of the Need Study.

Q. Please describe the key results of Gulf's most recent forecast.

A. The forecast shows that Gulf expects continued growth in number of customers, though at a slightly slower pace than over the last decade. Average usage per customer remains almost constant between now and the in-service date of Smith Unit 3.

Summer peak demand, which is the primary factor that drives Gulf's capacity planning process, is projected to grow by 126 MW, from 2,154 MW to 2,280 MW, between 1998 and 2003.

Schedule 1 of our exhibit (MDN/MJM-1) contains a summary of the key forecast results. More detail is provided in Appendix B to the Need Study.

Q. Please identify Gulf's conservation programs.

A. Gulf has in place several conservation programs designed to achieve demand and energy reductions in the Residential, Commercial and Industrial classes of customers. These include programs that have been in place for several years as well as the new programs submitted in Gulf's Demand Side Management Plan filed

in 1995. These programs are listed on Schedule 2 of our exhibit (MDN/MJM-1) and are described in detail in Section 4.3.4 of the Need Study and Section B.1.4.4 of Appendix B to that study. These programs are designed to provide the maximum amount of cost-effective conservation reasonably available to the Company.

Q. How does Gulf take into account the anticipated impacts of conservation programs on the peak demand and energy projections?

A. Each of Gulf's conservation programs is evaluated individually to determine the historical customer participation trends. Program participation rates are then projected based upon these trends and anticipated changes in participation rates obtained from Gulf's Residential and Commercial marketing program managers. The expected number of participants per year is then multiplied by the demand and energy reductions per participant for each of Gulf's conservation programs. The reductions are then accumulated to determine the total anticipated conservation impacts on summer peak demand, winter peak demand, and annual energy.

Q. What does this analysis show about the impact of Gulf's conservation programs?

A. As indicated in Schedule 3 of our exhibit (MDN/MJM-1), Gulf expects to achieve a total cumulative annual reduction of 365 megawatts (MW) in summer peak demand, 423 MW in winter peak demand, and an annual energy savings of nearly 650 million kilowatt-hours by the year 2002 from what the figures would have been without such programs. More detail on these results is contained in Tables B-1 through B-11 of Appendix B of the Need Study.

Q. What is Gulf's track record on forecast accuracy?

A. Gulf's forecasts have been very accurate. The FPSC's Review of Electric Utility 1998 Ten-Year Site Plans indicated that, of the nine reporting utilities in the state with sufficient available historical data, Gulf's average absolute percent error in retail sales forecast accuracy for the period from 1993 through 1997 was 2.5% and ranked third best in the state. Gulf's average forecast error for the same period was estimated to be an under-forecast of 1.19%, which also ranked third in the state. We believe that this is evidence of the high quality of Gulf's forecast.

Q. Does this conclude your testimony?

A. Yes it does.

Q (By Mr. Badders) I'll ask the witnesses to please summarize your testimony.

WITNESS MARLER: Good morning, Commissioners. Our testimony describes the load forecasting methodology for Gulf Power Company, the role of conservation programs and the forecast, and the effective conservation measures on a projected growth consistent peak demand.

Gulf Power Company is one of five operating companies of the Southern Company, who's responsible for the development of customer, energy and peak demand projections for our own system, which are in turn aggregated to a total Southern system level to provide the projections necessary for the development of our planning for growth.

These projections take into account the latest economic outlook for each of the operating companies, as well as the conservation measures impact unique to each service area.

Gulf's total forecast employs a number of different forecasting techniques and methodologies. These range from short-term forecasts of customer growth to long range forecast of energy sales using sophisticated models such as REEPS and COMMEND. These efforts are predicated on the philosophy of knowing

and understanding the needs, perceptions and motivations of our customers, and actively promoting wise and efficient uses of energy.

Our forecasting techniques and methodology have proven to produce very accurate forecasts. The forecasts shows that Gulf expects continued growth. Summer peak demand, which is the primary factor that drives Gulf's capacity planning process, is expected to grow by 111 megawatts by the year 2002.

This concludes my portion of our summary.

WITNESS NEYMAN: Good morning, Commissioners. As Mr. Marler stated, our forecast reflects several conservation programs Gulf has in place designed to achieve demand and energy reductions in all customer classes. These include programs that have been in place for several years, as well as the programs currently included in Gulf's demand-side management plan filed with the Commission.

These programs continue Gulf's long tradition of providing conservation programs that focus on delivering customer value, and are designed to achieve the maximum amount of cost-effective conservation reasonably available to the company.

There are no additional cost-effective conservation measures that can be undertaken which

would mitigate the need for the proposed unit. As a result of these programs, Gulf expects to achieve a reduction of 365 megawatts in peak demand in annual energy saving of nearly 650 million kilowatt hours by the year 2002.

This concludes our summary.

CHAIRMAN GARCIA: Very good.

MR. BADDERS: We tender the panel for cross examination.

CHAIRMAN GARCIA: LEAF.

MS. KAMARAS: We have no questions.

MS. JAYE: Staff has no questions.

COMMISSIONER CLARK: I was wondering if you could sort give an explanation of why you think the expected growth in the number of customers will be slightly slower in the future than it was over the last decade?

WITNESS MARLER: Well, actually we're currently in a pretty good growth period. And as far as percentage terms, it might look slightly lower than it has in the past because the base in total number of customers is growing larger, but our annual customer gains is, indeed, slightly higher than average for the next few years, and it drops back to an average level after that.

COMMISSIONER CLARK: So you're saying it's the percentage that's going to be less? On Page 7 of your testimony you say that the forecast shows Gulf expects continued growth in the number of customers but at a slightly slower pace than over the last decade. That is counterintuitive to me. It seems like the Panhandle is growing. And I was wondering why your growth would be less in the future?

WITNESS MARLER: The Panhandle is growing, but in our service area it's starting to get fairly full. And a lot of the growth that's going to take place in the Panhandle in the out-years will take place and that's just outside of where we actually serve, in some of the eastern half of our service area.

COMMISSIONER CLARK: So is it the percentage that won't be as high or the actual number of customers that won't be as high?

WITNESS MARLER: The percentage actually is just slightly lower. The number of customers -- as I stated, the annual gain is expected to be slightly higher than the average for the next few years and then drop back to a fairly average level.

COMMISSIONER CLARK: Okay. Thanks.

COMMISSIONER DEASON: A question I have also

concerns growth and it has to do with the growth in kilowatt-hour per customer.

And I've noticed that both for residential, as well as for commercial customers, you're forecasting that that growth is going to be significantly lower than it was for the ten-year period 1989 through 1998, and why is that?

WITNESS MARLER: Again, we're talking number of customers -- energy.

COMMISSIONER DEASON: That is a kilowatt-hour consumption per customer. I assume -- I'm looking at your exhibit, which has been identified as Exhibit 4, and for the column, 1989 through 1998, that is a ten-year period -- I assume those growth factors, that's an average for the ten years, annual average, correct?

WITNESS MARLER: Yes, sir. It's the compound average annual growth rate.

COMMISSIONER DEASON: So, for example, for residential you show that historically it's been 1.1 % and you're forecasting .1% for the period 1998 through 2003.

WITNESS MARLER: Yes, sir. And a lot of that has to do with the impact of our conservation programs. The growth and energy use per customer is

driven primarily by price and weather, and it also reflects the adjustments necessary due to our upcoming conservation programs. One of those is the Residential Advanced Energy Management Program that we're getting underway currently. So it ends up holding our long-term kilowatt-hour per customer fairly flat.

COMMISSIONER DEASON: What would happen if we start seeing growth in consumption per customer which approaches that that was seen historically, they were just -- it would make the need for this plant even greater than it exists under your current forecast?

WITNESS MARLER: Yes, sir.

COMMISSIONER DEASON: I have another question, and it has to do with your testimony on Page 6. And it's in reference to the Hourly Electric Load Model and some of the various factors that that model addresses. And one of those factors is fuel share changes. Could you explain that further, please?

WITNESS MARLER: The Hourly Electric Load Model is a model developed by EPRI, and it's an end use load forecasting model.

The inputs for this model come from the end

use energy forecasting models that we use, REEPS and COMMEND. Each of those models outputs electric energy consumption projections for heating, air conditioning, water heating, things of that nature. Each of those are input into HELM and modeled under various load shapes that are developed from historical load research data.

In the industrial sector the inputs are -- for our major handbill industrial customers we have 45 customers that we model individually, and their energy forecast and model under their load data that we also collect under the Cost of Service Load Research Rule. And all of these individual load shapes are modeled at the 8760-hour level per year. They are all individually summed together to aggregate a total system 8760-hour forecast.

The fuel share changes are reflected in each of the end use energy models that feed into this demand model. Within REEPS, for instance, it models the increase or decrease in electricity consumption relative to gas for heating and air conditioning, water heating, cooking. Similar things happen in the commercial sector for heating and cooking, and all of these individual fuel share changes then feed into the HELM model, and the electricity portion of it is

modeled under various load shapes to develop our total system load forecast.

COMMISSIONER DEASON: What does your model indicate as to the trend in fuel share changes in your service territory?

WITNESS MARLER: I don't --

COMMISSIONER DEASON: Are we going to be seeing more gas consumption than electric consumption, or vice versa, as compared to historical?

WITNESS MARLER: I believe it's vice versa, Commissioner. Our current forecast for electric price is in real terms decreasing relative to gas, and that would indicate an increase in electricity consumption. That would be offset by our conservation programs that we have implemented.

COMMISSIONER DEASON: And so how does this -- even with that trend you're still forecasting a net reduction in growth in consumption per customer?

WITNESS MARLER: Actually, it's fairly flat, yes, sir.

COMMISSIONER DEASON: And these fuel share changes, this primarily affects commercial customers, correct? Or do you also look at how it affects residential customers as far as water heating and things of that nature?

WITNESS MARLER: Yes, sir. Residential and commercial both.

COMMISSIONER DEASON: So it affects both.

COMMISSIONER CLARK: Do you have an understanding of what it is for the other companies in the Southern Company? Do they think consumption per customer is going to be flat, or are they anticipating an increase in consumption per customer?

WITNESS MARLER: It's different for each operating company.

They have varying levels of electric heating saturation, for instance, and different markets. They also have different conservation programs in place that are mandated by their commissions.

So I believe the general trend is similar. I'm not positive, but I know it is different for each of the operating companies as far as the -- increasing or decreasing the level of electricity versus gas.

CHAIRMAN GARCIA: Redirect?

MR. BADDERS: No redirect. We'd like to move Exhibit 4 into the record.

CHAIRMAN GARCIA: Okay. Show Exhibit 4 admitted into the record.

(Exhibit 4 received in evidence.)

MR. MELSON: Gulf Power calls William F.

Pope. Mr. Pope has been sworn.

WILLIAM F. POPE

was called as a witness on behalf of Gulf Power Company and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. MELSON:

Q Mr. Pope, would you state your name and address for the record, please?

A William F. Pope. One Energy Place, Pensacola, Florida.

Q And what is your position with Gulf Power Company?

A I'm the Coordinator of Bulk Power Planning for Gulf Power.

Q And have you prefiled 15 pages of Direct Testimony in this docket?

A Yes, I have.

Q And have you also filed a revised Page 12 to that testimony?

A That is correct.

Q And in addition to the Direct Testimony, have you filed three pages of supplemental testimony in this docket?

A Yes, I have.

Q And is it fair to say that that supplemental testimony updates your direct to reflect a change in the output of the unit as a result of the engineering refinements Mr. Moore discussed?

A Yes, it does.

Q If I were to ask you today the same questions that are in your Direct and Supplement Direct Testimony, would your answers be the same?

A Yes.

MR. MELSON: Mr. Chairman, I'd ask that both the Direct, with the Revised Page 12, and Supplemental Direct be inserted into the record.

CHAIRMAN GARCIA: Yes. Show them inserted into the record.

Q **(By Mr. Melson)** Mr. Pope, did you have two schedules attached to your Direct Testimony identified a WPF-1?

A That's correct.

Q A one schedule attached to our Supplemental Testimony identified as WPF-2?

A That's correct.

Q And were those schedules prepared by you or under your direction and supervision?

A Yes, they were.

MR. MELSON: Mr. Chairman, I'd ask that

WPF-1 and WPF-2 be identified as composite exhibit -- let me do it separately. Could I ask that WPF-1 be identified as Exhibit 5.

COMMISSIONER JOHNSON: So it identified as Exhibit 5.

(Exhibit 5 marked for identification.)

MR. MELSON: And could we ask that WPF-2 be identified as Exhibit 6?

CHAIRMAN GARCIA: Show that identified as Exhibit 6.

(Exhibit 6 marked for identification.)

Q **(By Mr. Melson)** And, Mr. Pope, in addition to those prefiled exhibits, are you also sponsoring Chapters 3, 5, 6, 7 and Appendices C and D of the Need Study that's previously been identified as Exhibit 1?

A Yes, I am.

Q Do you have any changes to your portion of that Need Study?

A No, I don't.

GULF POWER COMPANY

Before the Florida Public Service Commission
Direct Testimony of
William F. Pope
Docket No. 990325-EI
Date of Filing: April 5, 1999

Q. Please state your name, business address and occupation.

A. My name is William F. Pope, and my business address is One Energy Place, Pensacola, Florida 32520. I am the Coordinator of Bulk Power Planning for Gulf Power Company.

Q. Have you previously testified before this Commission?

A. Yes. I have testified in various proceedings including cogeneration rule hearings, a territorial dispute, planning hearings, proposed rulemakings, and tariff dockets.

Q. Please summarize your educational and professional background.

A. I graduated from the University of Florida in March, 1975 with a Bachelor of Science in Electrical Engineering; and in May, 1985, I graduated with a Masters of Business Administration from the University of West Florida. After graduation in 1975, I was

employed with the Gainesville-Alachua County Regional Utilities, which is a unit of the City of Gainesville, Florida as a System Planning Engineer.

In October of 1978, I joined Gulf Power Company and spent the next eight years in various engineering and supervisory positions at two of the Company's electric generating plants.

In April of 1987, I became Supervisor of System Planning which made me responsible for the Company's long range distribution, transmission, and generation planning. On May 1, 1993, I assumed my current position of Coordinator of Bulk Power Planning at the Corporate Office in Pensacola. In this position, I am responsible for supervising the Company's activities for capacity resource and transmission planning for Gulf Power's long-range needs, along with other bulk power operational and planning issues. The activities of System and Bulk Power Planning are deeply integrated with the marketing, load forecasting, financial, power delivery, distribution, and regulatory areas within Gulf Power Company.

Q. Have you prepared an exhibit that contains information to which you will refer in your testimony?

A. Yes. I have an exhibit consisting of 2 schedules to which I will refer. This exhibit was prepared under my supervision and direction. I am also sponsoring Sections 3, 5, 6, and 7, as well as Appendices C and D of the Need Study filed in this docket.

Counsel: We ask that Mr. Pope's Schedules 1 and 2 be marked for identification as Exhibit 5 (WFP-1).

Q. What is the purpose of your testimony?

A. My testimony will describe the Southern electric system Integrated Resource Planning (IRP) process in which Gulf Power Company participates, the current capacity needs as determined by this process, the specifics of the self-build alternative evaluation process, and how the results of these evaluations led up to the Request for Proposal (RFP) process.

Q. In your position as Coordinator of Bulk Power Planning, what part did you play in the process leading up to the ultimate decision to pursue the construction of Smith Unit 3?

A. My responsibility in this process was to direct the generation and transmission planning for Gulf in its role in the Southern electric system (SES) planning

process. As such, I ensure that the interests of Gulf's customers are met when considering the future generation and transmission needs as they are integrated into the planning process of the Southern operating companies.

Q. Could you briefly describe the Company's planning process?

A. Gulf Power is one of the five electric utility operating companies of Southern Company. Together, all of the operating companies - Alabama Power, Georgia Power, Gulf Power Company, Mississippi Power and Savannah Electric & Power - comprise a centrally dispatched resource pool. As such, the companies coordinate their planning for the entire system. Individually, we provide input regarding our customers' load and energy needs in the future. These are in turn used as input into a generation mix analysis in order to formulate overall capacity resource needs for the Southern electric system. A more detailed explanation of Southern's IRP process is contained in Section 3 of the Need Study.

A very important portion of this input is Gulf's Load and Energy Forecast, which incorporates reductions due to cost-effective demand-side measures.

The summer peak demand is the driver for determining the need for future capacity resources. Gulf's information is combined with the other operating companies' forecasts in order to determine the overall Southern system summer and winter peak demands that must be met in a reliable manner. The details of the forecasting process are covered in the Need Study as well as the testimonies of Margaret D. Neyman and Michael J. Marler.

Q. Please describe what started the process that ultimately led to Gulf's decision to seek certification for Smith Unit 3?

A. Throughout the subsections of Section 3.4 of the Need Study there is a chronology of the SES resource planning and procurement activities for 1995 through 1998. For a number of years, Gulf's reserves are low, even with the firm purchases that expire at the end of 2001. As mentioned in Section 3, Gulf is able to rely on temporary surpluses on the Southern system to supplement its own capacity resources. However, as those surpluses decline, Gulf must provide resources that contribute a reasonable share to the Southern system's reserve requirements.

The 1995 IRP and the subsequent updates in 1996 and 1997 indicated that the Company had capacity resource needs ranging between 300 MW and 350 MW by the year 2002. Gulf's corresponding Ten-Year Site Plans contained the Company's plans to satisfy these needs with short-term purchases until the time came to make new capacity resource decisions. Gulf's choice of short-term purchases was primarily aimed at providing the Company time and flexibility before having to consider making an investment in new capacity.

The Company did, in fact, participate in a solicitation for short-term capacity and energy issued by Southern Company Services in March 1997. This RFP solicited offers for Gulf's short-term resource needs beginning in 1999. As mentioned in Section 3.4.4 of the Need Study, the offers received in this solicitation confirmed that not only were the amounts of firm capacity getting scarce, but expensive as well. The Company did secure firm capacity as a result of the 1997 solicitation that will expire at the end of 2001. Because of the response to this solicitation, Gulf knew that it needed to look seriously at its capacity resource alternatives to meet the Company's needs for 2002 and beyond.

Q. How did the Company begin its investigation of capacity resource alternatives?

A. As a first step, Gulf started considering its self-build options. In late 1997, the Company launched an investigation of self-build alternatives for its 2002 capacity needs. At the time this evaluation was started, the Company's capacity shortfall in 2002 was estimated to be 352 MW according to the newly completed 1998 IRP. This IRP also indicated that Gulf needed a combination of combustion turbine and combined cycle capacity.

Q. Please describe Gulf's self-build evaluation.

A. As outlined in more detail in Section 7 of the Need Study, the Company began looking at a variety of site-specific options. Initially, the Company considered units in the 250 MW range, but quickly changed its focus to a larger unit in the 500 MW range, which more closely matched the Company's capacity need and provided significant economies of scale.

Based on the technology screening process already performed as a part of the Southern IRP process, Gulf knew that either a combined cycle (CC) or a combustion turbine (CT) technology would be the most appropriate

self-build alternative. Also, because of capacity planning activities of other Southern operating companies for resources in the same time period, the Company had a unit sharing-opportunity to consider as well. The following is a listing of the self-build alternatives that were ultimately considered in this evaluation process:

- Participation in Mississippi Power's Daniel Combined Cycle unit scheduled for a 2001 in-service date
- Construction of Combustion Turbines at Smith Plant
- Construction of a Combined Cycle unit at Smith Plant
- Participation in a Cogeneration unit in the Pensacola area

Q. Briefly describe how the self-build analysis was conducted.

A. The self-build evaluation was conducted on a total cost basis, considering all costs or benefits associated with any particular option. Two of the major factors in the analysis were the cost of the fuel supply and transmission system impacts. Sections 7.3.1, 7.3.2, and 7.3.3 of the need study cover these factors and their consideration in more detail.

It is important to note that the natural gas supply pricing assumptions were a major uncertainty during the self-build analysis. The Southern system develops a generic natural gas price forecast for the planning process, whose components are a well-established regional commodity price and an average SES transportation cost. When it comes to site-specific evaluations, the only major factor that dramatically affects the natural gas supply price is the pipeline transportation costs. This is particularly significant for a site like Smith Plant where no gas supply currently exist.

Q. How was the natural gas supply addressed for the Smith site in the self-build analysis?

A. As mentioned above, the regional commodity price (or wellhead cost) is well-established and competitive within a region. Therefore, all natural gas commodity suppliers will react in the same manner to price changes by others in the region. On the other hand, gas transportation costs vary quite considerably in different areas in the region. The different gas transportation alternatives that were investigated for the Smith site in the self-build analysis ranged from interconnecting with the closest pipeline, Florida Gas

Transmission, to constructing a new pipeline to the plant from Atmore, Alabama.

This range of alternative gas supply options was necessary for Gulf to determine if a unit installed at Smith Plant was competitive with the other options. Gulf recognized that the transportation cost assumptions provided by SCS Fuel Department were the best available at the time, but the actual costs could be significantly different once the Company were to actually receive offers from pipeline companies. It was not until after the conclusion of the self-build evaluation that the Company received offers from a number of pipeline companies with more attractive natural gas transportation alternatives. This is covered in more detail in Section 7.3.1 of the Need Study.

Q. Other than natural gas transportation, does the Company have any other fuel supply concerns?

A. Yes. Another major concern to the Company of any natural gas supply alternative is the reliability and firmness of the supply. This is one of the reasons that the construction of a pipeline from Alabama was preferred over non-firm gas service from the FGT pipeline in the self-build evaluation process.

Reliability of supply is still a major factor being considered in the current negotiations with those that have subsequently provided the Company with gas transportation offers. Based on what Gulf has already been able to determine in these negotiations, the Company is convinced that a reliable natural gas supply can easily be secured with at least three of the potential suppliers. Gulf expects that by the time the hearings in this docket occur, the Company will have nearly completed its negotiations and secured a reliable and cost-effective natural gas supply for Smith Unit 3.

Q. Please describe how the self-build alternatives were economically evaluated.

A. The self-build process analyzed the cumulative net present value (NPV) for the various alternatives in this evaluation. The analysis included capital costs, fixed and variable O & M costs, fuel costs, and other financial impacts over a twenty-year time frame. These costs were present valued back to 1998 dollars to allow the site-specific alternatives to be evaluated on an equal basis. The total incremental costs of each option, including any required transmission system improvements, were considered when

reaching the final results of this evaluation. The combined cycle cost figures that were used in this process were considered preliminary engineering cost figures.

Q. What were the results of the self-build analysis?

A. Considering all of the cost factors, including construction costs, fuel supply costs, transmission impacts, and system energy costs and savings, the self-build analysis revealed that a 500 MW class CC unit at the Company's existing Smith Plant was the best self-build alternative. Schedule 1 shows the results of the self-build analysis. These results are based on a common megawatt block size to keep all alternatives on equal footing during the analysis.

Q. Are there any transmission line additions required in connection with Smith Unit 3?

A. No. The output of Smith Unit 3 can be integrated into the Northwest Florida grid with no additional transmission lines. However, some upgrades to existing lines are needed and have been included in the cost-effectiveness evaluation of Smith Unit 3.

Q. How does the addition of a 500 MW class combined cycle unit affect Gulf's resource needs and reserves for 2002 and beyond?

A. As mentioned earlier, the 1998 IRP identified a capacity shortage of 352 MW for the Company in 2002. However, Gulf's latest demand and energy forecast and Southern's IRP update for 1999 indicate that Gulf will need 427 MW of capacity resources in 2002 in order to achieve its share of the SES 13.5% summer reserve margin criterion. This further highlights the appropriateness of the installation of a 500 MW class unit in 2002.

Q. Are there any additional, cost-effective conservation measures that could avoid or defer this unit?

A. No. Smith Unit 3 can neither be avoided nor deferred by additional conservation measures. As mentioned in the testimonies of Gulf's witnesses Neyman and Marler, all reasonably available cost-effective conservation measures have already been factored into Gulf's Load and Energy Forecast. With a need by the Company of 427 MW in 2002, or approximately 80% of the peaking rating of Smith Unit 3, it would take the cumulative effect of many years' worth of additional conservation measures to have any impact on the timing of this unit. Stated another way, if Smith Unit 3 were not constructed, cost-effective conservation measures

would still leave Gulf and its customers seriously short of capacity resources.

Likewise, the temporary surplus in capacity of Smith Unit 3 will be fully needed for Gulf's territorial customers and its reserve requirements by the year 2006. Schedule 2 shows the Company's demand, capacity resources, and reserves for the period 1999 through 2008 assuming the installation of Smith Unit 3. As Table 3-5 in the Need Study shows, the Company's reserves would become negative in 2002 without the installation of any resource additions.

Q. Did the self-build analysis lead to a decision to build Smith Unit 3?

A. No. As mentioned before, at this point the Company had fairly evaluated its self-build or participation options. However, Gulf still needed to determine whether the competitive market could provide a more cost-effective alternative to the Company's own construction.

Q How did Gulf proceed to identify other alternatives?

A. Gulf coordinated with SCS and drafted an RFP that was issued on August 21, 1998. The testimony presented by Maria J. Burke details the RFP process and the

analyses that were performed on the offers received. It was this evaluation process that led to the final decision to seek certification for Smith Unit 3.

Q. Does this conclude your testimony?

A. Yes.

GULF POWER COMPANY

Before the Florida Public Service Commission
Supplemental Direct Testimony of
William F. Pope
Docket No. 990325-EI
Date of Filing: May 17, 1999

Q. Please state your name and business address.

A. My name is William F. Pope. My business address is One Energy Place, Pensacola, Florida 32520.

Q. Have you previously filed direct testimony in this docket?

A. Yes.

Q. What is the purpose of your supplemental direct testimony?

A. The purpose of my testimony is to provide updated information on Gulf's reserve margins following the addition of Smith Unit 3. This update includes the effect of the 34 MW increase in the unit's peak output that Mr. Moore has described. This information is presented Schedule 3 which is attached to this testimony. This exhibit was prepared under my supervision and direction.

Counsel: We ask that Mr. Pope's Schedule 3 be marked as Exhibit 6 (WFP-2).

Q. What does this exhibit show?

A. It shows that the addition of the incremental capacity would allow Gulf to have a summer reserve margin of 19.1% in 2002, gradually decline to 12.4% in 2006.

Q. Would you describe the transmission impacts of Smith Unit 3 under both normal and contingency situations?

A. The addition of the 574 MW of Smith Unit 3 capacity has no adverse impacts on the transmission system under normal peak operating conditions throughout the planning horizon. However, Gulf always plans its system to handle the simultaneous loss of any unit and transmission element (line or transformer). Under the worst case contingency which includes the addition of Smith Unit 3, it will be necessary to increase the load carrying capacity of three transmission lines in the Panama City, Florida area. The lines requiring the upgrades include the Smith to

Greenwood, Smith to Highland City, and Highland City to Callaway 115 KV lines.

The upgrades to these lines will consist of changing the existing wire to a new wire that will carry more power. This work will be conducted on existing facilities and will not include the addition of any new structures or line segments. None of this work involved with these transmission line upgrades will constitute the addition of "associated linear facilities" for licensing purposes of Smith Unit 3. Furthermore, the cost of these transmission line upgrades was considered in the economic evaluation of Smith Unit 3.

Q. Does this conclude your testimony?

A. Yes.

Q **(By Mr. Melson)** I believe we're at the point where I can ask you to summarize your testimony.

A Good morning, Commissioners.

In my position as the Bulk Power Coordinator for Gulf Power Company I'm responsible for the capacity resource planning activities of the Company. I provide information necessary to the company to make power supply decisions. It is this information that leads to the need determination process for the most cost-effective capacity resources for Gulf Power Company and its customers.

I was involved in the entire process leading to this need determination, including the transmission planning aspects associated with the various alternatives. I'm here today to specifically address the resource planning process, the Company's capacity needs in the year 2002, the initial self-build investigate -- alternative analysis, and the transmission aspects of the various alternatives.

My testimony spans the areas from the beginning of the process through the RFP process. Although I was still very much involved in this process through the RFP, any specific issues dealing with those analysis need to be directed to Ms. Burke, who will testify after me.

Without any addition of capacity resources, Gulf will have a negative reserve margin in the year 2002. Gulf's need in the year 2002 is 427 megawatts.

We have determined that the most cost-effective self-build alternative for our customers is the construction of Smith Unit 3. Ms. Burke, as I said, will cover how this option is better for the customers as compared to any others offered to us in the RFP process.

Gulf Power Company believes that its presentation of the facts in this need determination clearly demonstrate the need and the most cost-effective -- cost-effectiveness of the Smith Unit 3.

Thank you, and that concludes my summary.

CHAIRMAN GARCIA: Thank you.

Q (By Mr. Melson) Mr. Pope, in your direct testimony you talk about what were then ongoing negotiations for natural gas supply. Have there been some recent developments in that regard that you'd like to update us on?

A Yes. As of late Friday afternoon, Friday evening, Gulf Power Company did execute a natural gas transportation arrangement and contract for the Smith Unit for 20 years. That's a firm natural gas contract

and arrangement.

COMMISSIONER CLARK: From who?

MR. MELSON: Commissioner, we may have a confidentiality concern with that. There are some very stringent confidentiality provisions in that agreement.

COMMISSIONER CLARK: This is for transportation, right?

WITNESS POPE: That's correct.

COMMISSIONER CLARK: Well, does it come from FGT or from Atmore? Those are the two alternatives. But if it's confidential, that's --

MR. MELSON: Commissioner Clark, actually there were, as a result of gas solicitation, I believe the record reflects there were about five alternatives on the table; some existing, some proposed. And at this point I think we do have a confidentiality concern identifying the specific company.

COMMISSIONER CLARK: I guess I'm confused. I thought you had just two alternatives for transmission, and -- are you buying transmission separate from the supply?

WITNESS POPE: That's correct.

COMMISSIONER CLARK: And you have recently negotiated something for transmission?

WITNESS POPE: Transportation of the natural gas. That's the pipeline aspect of it, whereas the other is the commodity aspect of it.

COMMISSIONER CLARK: You have not yet negotiated the commodity aspect of it?

WITNESS POPE: That's correct.

CHAIRMAN GARCIA: Okay.

COMMISSIONER CLARK: What -- in Atmore, Alabama, whose pipeline would you go to there?

WITNESS POPE: That's actually the location of -- two interstate natural gas pipelines are in this area, and that's one of the advantages in looking to that area, you have the opportunity to connect to both for competitive reasons.

COMMISSIONER CLARK: How far away is Atmore, Alabama from --

WITNESS POPE: It's approximately 125, 130 miles away from the Smith project, by pipeline, depending on the route.

COMMISSIONER CLARK: Thank you.

CHAIRMAN GARCIA: Okay. LEAF.

COMMISSIONER JACOBS: You're not going to own that, are you?

WITNESS POPE: No, sir. We are responsible for the cost of the metering station and the

connection into and on the plant property. I believe Mr. Moore was asked that question earlier. That cost is included in our evaluation process. No, we will not own the pipeline outside the plant property.

CHAIRMAN GARCIA: Ms. Kamaras?

MS. KAMARAS: LEAF has no questions.

CHAIRMAN GARCIA: Staff.

MS. JAYE: Staff is going to pass out a composite exhibit. This exhibit has information dealing with both Witness Pope and Witness Burke, and Staff will be referring to it during the cross examination of these two witnesses.

COMMISSIONER JACOBS: While you're doing that, there's no backup fuel for this; is that correct?

WITNESS POPE: That's correct. We had not planned on having a backup fuel source for Smith Unit 3 because of the approach of securing a firm natural gas supply.

COMMISSIONER JACOBS: Say that again?

WITNESS POPE: Because of the efforts to, and success in, acquiring the firm natural gas supply, it really does not benefit us from a reliability standpoint.

MS. JAYE: Staff's composite exhibit does

have the component that is confidential. It is being handed out in manila envelopes that are marked "Confidential." The pages that refer to confidential information in the redacted version so state. Staff's questions will refer to confidential information but will but not refer to any exact nature of that information. We will not delve into that and ask for any disclosure of confidential information. (Pause)

I'm waiting for Chairman Garcia to get an identification --

COMMISSIONER DEASON: That's what I'm here for.

MS. JAYE: Commissioner Deason, could we get an exhibit number for Staff's composite exhibit consisting of both the redacted and the confidential version.

COMMISSIONER DEASON: Sure. What's the next exhibit number?

MS. JAYE: Exhibit No. 7.

COMMISSIONER DEASON: 7.

MR. MELSON: Just so I'm clear, was that the -- that's this? (Indicating)

MS. JAYE: It will be both of those together identified; the redacted version and confidential version. (Pause)

Staff has informed me they need two exhibit numbers for this; one for the nonconfidential exhibit and one for the confidential exhibit.

COMMISSIONER DEASON: The nonconfidential will be identified an Exhibit 7. The confidential exhibit will be identified as Exhibit 8.

(Exhibits 7 and 8 marked for identification.)

Q **(By Ms. Jaye)** Mr. Pope, if you would, please turn to Page 119 of the nonconfidential exhibit which has now been marked as Exhibit 7.

A Okay.

Q Take a look between Pages 119 and 191 and tell me if you recognize this document?

A Yes.

Q Could you tell me what it is, please?

A This is the deposition -- my deposition taken May 10, 1999. It's a transcript of it.

Q Do you have any changes to that document?

A No, I don't.

Q I have a question about transmission studies for you. When transmission studies are performed in order to evaluate the impact of the proposed generating unit addition in Gulf's territory, are those studies performed by Southern Company Services

or by Gulf?

A Southern Company Services.

Q And the analysis that Southern Company Services use, are those based upon impacts on Gulf Power's service territory or upon the entire Southern Company system?

A The studies are performed using the Southern Company -- an entire Southern Company, and a reduced representation of the transmission system just outside of Southern Company. So when you ask about study results and what they result in, there will be impacts to the entire Southern Electric system as a result of any study done. Now, what is of concern to Gulf is only those things that are caused by Gulf's unit and transmission line outages and what impacts those.

Q Could you describe the general power flows on Gulf's system as it now stands?

A Yes. I believe today, if you were to look at the flow of power on Gulf Power Company's system, there's a flow of power from the west towards the east. And the reason for that is that there's significantly more generation from the Pensacola/Mobile/Pascagula/Gulfport area as opposed to the load. There's load -- load all up and down that area, but there's also load to the east of us,

Fort Walton Beach, Panama City, Graceville, Quincy, on over to Jacksonville where there's other significant amounts of generation.

So if you'll see, generation has to get to where it is consumed. That's where the load is. There's predominantly more generation to the west than there is between here and Jacksonville, with the exception of the Farley nuclear power plant in Dothan. So there's a predominant flow of power through Gulf Power Company's system and through southern Alabama's system, from the west towards the east.

Q Does this result in a mismatch between load and generation in the Panama City area?

A There is a mismatch of load and generation in the Panama City area, in that surrounding area there.

Q Is that mismatch the reason that Gulf's RFP stated new units built near Panama City would have a, quote, "significant transmission cost advantage"?

A It is a significant factor, particularly when looking at your alternatives of other generation resources, as well as the Smith Unit 3. Generation in the Panama City area provides you a tremendous, I guess, shift in that mismatch of having more load than generation in the area. Now you have generation

sufficient to meet that load and actually export a little bit of that generation to other areas, such as Fort Walton Beach to the west of Panama City, reducing the impacts on the transmission system for a number of years.

Q If you would please refer to Staff's composite exhibit, this would be on Page 9, this is Gulf's Response to Staff's Interrogatory No. 4.

A I've got it.

Q Is this page, with the different respondents on it, reflect that Smith Unit 3 has the best transmission cost advantage over the RFP respondents?

A Yes, it does.

Q And is this because Smith Unit 3 is closest to Panama City, thus requiring fewer transmission additions and upgrades?

A That's correct.

Q Is there a backup fuel source for Smith Unit 3 as proposed?

A No, there is not.

Q Why does Gulf not plan to have a backup fuel source for Smith Unit 3?

A Primarily the reason is the need or cost-effective need of it. The Company's strategy on Smith Unit 3 is to have a firm natural gas supply,

sole source natural gas supply as a fuel for this unit. Having a backup fuel, although it would provide the company with the opportunity, if for some unforeseen reason that natural gas supply was interrupted, to generate on fuel oil or some other alternative fuel. However, Gulf's planning criteria is predicated on a unit and a line, transmission line or transmission element out. It can be any unit. So if you were to take Smith 3 and take it off line as a unit in our contingency planning criteria, and any line, our planning criteria says we will still be able to serve the customers. Our system, both transmission and other generation, is sufficient to provide the customer with power. So there is no need, from a reliability standpoint on Gulf Power Company's part, to have a backup fuel in the event there was a interruption of the natural gas supply. It's not our idea that we would ever expect that. But if it were to happen, reliability criteria says we're not going to lose customers.

COMMISSIONER DEASON: Let me ask a question at this point. You indicated, I believe, in your summary that without Smith Unit 3 in the year 2002 you'd actually have a negative reserve margin.

WITNESS POPE: That's correct.

COMMISSIONER DEASON: So how do you reconcile that statement with the testimony you just gave?

WITNESS POPE: The reserves, capacity reserves, are calculated based on the Company's generation resources compared to its load. Negative reserves means that the load would exceed what Gulf has in capacity resources from all sources, that's constructed or purchased -- that we have entitlement to. It can still be negative, and it has been negative in some years in the past, and we've still been able to provide power to the customers because of the transmission system and other temporary excess reserves of other companies, such as the other Southern operating companies, or other things that could be bought on an emergency basis. The planning criteria does not presume that we're going to make emergency purchases, but it allows the transmission system itself to operate. And if those facilities are sufficient to provide the customer with the power, then we feel that's sufficient.

In this case, even without Smith Unit 3 and another transmission line out, we could get the power to the customer. It stretches the system but we still could do it.

COMMISSIONER DEASON: So that capacity would be served by either off-system purchases or else purchases within the Southern system that would come into Gulf's territory?

WITNESS POPE: The power flows would come, Commissioner, when you look at reliability -- testing the system for reliability, at that point in time you're not concerned about where it's coming from or what the economics are, but mainly would it be likely available. In the planning criteria there is some tie assistance from outside Southern that allows those powers to flow into other parts of Southern Company. But what's more of concern to Gulf Power Company in its region is, is the system in the immediate area, around Gulf Power Company's service area, sufficient to get all possible available flows and generation into it if you had that event?

I guess you're asking is our assumption that we would buy it? I don't believe -- that's not really part of our study when we studied reliability, other than the standpoint that we do have some tie assistance modeled from an electrical standpoint; it's not a "Can we go buy a kilowatt from Duke" or someone.

COMMISSIONER DEASON: Well, it would seem that if -- without Smith Unit 3 you're going to be in

a negative reserve margin position, you've got to get it from somewhere other than your own system.

WITNESS POPE: That's correct.

COMMISSIONER DEASON: And then I guess the question is if you looked at the economics of that, and made any assumptions as to what you would have to pay to purchase that, and compare that with the cost of having dual fuel capability at Smith 3.

WITNESS POPE: That's correct, Commissioner. When you -- have we investigated that? This whole process, and this need determination, is a culmination of all those looks at things; our market tests. We went out for RFP for other alternatives to the construction of Smith 3. We've also done looks into the market for the near and long term -- to determine the economics of that. The power available other than things that came out of our RFP process, the power amounts are getting very scarce, plus they are getting very expensive. Those are in the economics considered here and that basically comes down to Smith is still -- Smith 3 is still the most cost-effective when looking at all of those things available to us. Yes, sir, we have done that.

COMMISSIONER CLARK: Just so I'm sure I understand what you're saying, you have looked at

providing -- the cost of providing backup fuel to this unit and compared it to the cost of purchasing power elsewhere and bringing it in. And have concluded from a cost-effective basis, that it's not cost-effective to have backup fuel for that unit; it's better to rely on the transmission system to bring in needed capacity.

WITNESS POPE: Commissioner Clark, the economics of providing backup fuel, there's an additional cost -- there would be an additional cost for the Smith Unit 3. And the evaluation of that cost is to the extent of whether it's needed. I cannot say that I've gone and said, well, I believe the unit will be off-line so many hours in a particular summer peak period, and what would it cost me to buy power from someplace else? And are those two costs equal?

COMMISSIONER CLARK: Or is the purchase of the power less than putting in the backup fuel?

WITNESS POPE: That's correct. I can't tell if that's more or less. I did not look at that particular aspect of it.

But, moreover, I looked at am I getting anything from the costs of adding backup fuel when I'm still going to provide power to my customers for an emergency, say, a forced outage. Those are the kinds

of things that are more prevalent to cause a unit to come off when you need it, and that's the boiler outages. There was a question about natural gas curtailments or interruptions; that's something that's less likely than a boiler outage. And a boiler outage, whether you had backup fuel or not -- wouldn't help you if you had backup fuel. So you're going to have to rely on other sources of power for those particular instances in any unit.

No, I did not specifically look at it will cost me blank-million dollars to put backup fuel up, and the two hours that I'm going to buy backup power, as opposed to backup fuel, costs me this much. I didn't do that. Our approach with backup fuel is do you need it, compared to getting a firm natural gas supply.

COMMISSIONER DEASON: Well, explain to me a situation then under that analysis which would ever show that a plant needs to have backup fuel capability.

WITNESS POPE: Let me make sure I understand, Commissioner Deason, what you're asking.

I believe you asked me that under -- looking at any plant, name a scenario where you would ever justify backup fuel.

I can't, off the top of my head, really think about a situation yea or nay. I believe every plant would need to be looked at differently. I believe there are enough cons, enough drawbacks to backup fuel issue with Smith Unit 3 and other combined cycle units that are going to be running on its primary fuel for long periods of time to not justify the backup fuel.

Backup fuel, deviating from firm supply of natural gas, means a couple of things, a number of things. You have to provide for dual fuel firing capability of the combustion turbines, which is a whole new set of combusters, fuel nozzles and controls. The fuel storage system, the fuel piping system and delivery system to the unit, if that system is not used and exercised from time to time, sediments start to settle out in it; moisture develops in it, and when called upon to be used, there are a lot of problems associated with that.

We know from experience -- we have one other combustion turbine that is an oil-fired unit. It's for peaking purposes only. But if we don't exercise it and run it for a hour a month to make sure that all of its equipment -- its water separators and things like that are working, it won't run when we call upon

it. That's something you have to do with a combined cycle unit for a far more -- for a larger expense. While you're burning oil through it to make sure everything runs, that's a higher cost to your customers than would otherwise be needed, and all to protect yourself from -- in this case natural gas -- supply interruption.

To go back to your question, I really can't, without looking at every specific unit, whether it be a coal-fired unit to begin with or whatever, as to what those circumstances would be to dictate backup fuel is justified.

COMMISSIONER DEASON: Well, I take your answer basically to say that you have not done this specific economic analysis to show whether dual fuel capability is cost-effective, but that intuitively you've dismissed it because of the operating problems, maintenance problems; the likelihood of the need to have that capability. But you actually have not done the analysis. Am I characterizing your response correctly?

WITNESS POPE: Not the economic comparison directly with the cost of providing backup fuel versus the cost of buying power if those situations were to exist. Because as far as customer service goes and

power to the homes, it's not interrupted because of an outage of the unit. Backup fuel won't help that.

COMMISSIONER DEASON: And I understand that. You've looked at it from a reliability standpoint. And that if there is -- if Smith Unit 3 goes off line because of unavailability of fuel, the system is such that that power loss can be replaced somehow, and that reliability is going to be maintained. And I understand that and I can accept that. My question is yes, but at what cost to the customer?

There could be a scenario -- and I don't know what the situation is in this case -- but it could be that the customer would be better off with a dual fuel capability to avoid paying potentially higher cost through a fuel adjustment clause to replace that. Or the scenario could be that the likelihood of that happening is so remote that -- and the up-front capital cost of having to install the various apparatus to allow you that dual fuel capability, plus operating complexities of doing so, doesn't justify it.

And I guess my concern is that the economic analysis has not been done, while from a reliability standpoint there's no problem. My concern is how can we assure the customer that he or she is better off

not having dual fuel capability?

WITNESS POPE: I agree with you, Commissioner. I do not have that number of what it would cost to replace. I do know that it would cost you roughly six to $8 million in capital cost up front. And it would cost you an additional million to a million and a half, to maybe $2 million a year just in O&M costs without ever having to burn the dual fuel, okay. And for a natural gas, or for a fuel supply interruption, considering just a million or so dollars a year in the capital cost, I can't see it being greater than -- I can't see the cost of replacement fuel being greater than that. But I have not done it, you're right.

COMMISSIONER CLARK: You mean the cost of replacement power would be greater --

WITNESS POPE: Excuse me. Replacement power, that's correct.

COMMISSIONER JACOBS: If I recall, one of the premises of your need was the expiration of your purchased power contract; is that correct?

WITNESS POPE: That's correct.

COMMISSIONER JACOBS: Are you anticipating -- maybe I didn't catch it, are there going to be contracts then that essentially serve as

your alternatives -- your backup, I'm sorry -- will you have additional purchased power contracts?

WITNESS POPE: No, sir. For an outage of a natural gas supply or something like that --

COMMISSIONER JACOBS: Right.

WITNESS POPE: No, sir.

COMMISSIONER JACOBS: Is that an option that you could explore?

WITNESS POPE: I guess we could but it's really not necessary nor justified from the standpoint that if you take a normal unit, any unit is going to have a forced outage rate; something that's going to force it off the line. And we don't today contract for backup power during those events. They are very few and far between -- it really is not necessary.

COMMISSIONER JACOBS: For your planning purposes then you're essentially saying that the likelihood of there being these outages is so low that you don't see the need to kind of hone in on that event and tailor a contract to service that outage.

WITNESS POPE: No. And that is one of the major reasons that people plan to have reserves above what your load is, is to account for unforeseen events. So in a way we do plan for that and provide for it in reserves.

COMMISSIONER JACOBS: You can see the concern. What you're saying is without this plant you have a negative reserve.

WITNESS POPE: That's correct.

COMMISSIONER JACOBS: So if this plant goes down, you'd have to come up with something. And what my question is, is what you're essentially going to do is go to the spot market at that time; is that correct?

WITNESS POPE: Instantaneously we would rely on the electrical system, the grid itself.

COMMISSIONER JACOBS: Who would you be purchasing from?

WITNESS POPE: It would come from our interconnection agreements with -- and our pool arrangement with the Southern electric system. Most likely if it were to happen, the Southern electric system would pick up generation and other dispatched units that we're already a part of and make up that power; it wouldn't have to come from outside.

COMMISSIONER JACOBS: What's the guidepost there? What's the cap? Are you essentially going to pay what the market will bear or what?

WITNESS POPE: It won't be market; it will be incremental generation cost from the Southern

electric system for those. That's the pool we're already a member of anyway.

COMMISSIONER JACOBS: Okay.

CHAIRMAN GARCIA: Mr. Jaye, do you want to continue?

MS. JAYE: Yes, Commissioner.

COMMISSIONER CLARK: Let me just ask a question. You're saying you would purchase from other Southern Company generating facilities at your interexchange rate and you have schedules, right, for those purchases from the Southern Company system?

WITNESS POPE: There's no purchases from the Southern electric system. The Southern electric system is essentially a dispatched pool. We're all part of the Southern electric system, which is dispatched on an incremental basis anyway. We don't have schedules as such. The system is -- units are committed to meet peak demands on a daily basis, and whatever unit is the next economic choice will be picked up by computer program; it picks them up.

COMMISSIONER CLARK: Suppose your plant that you're building would be the next choice but it's off line so you go to the next choice up. You would be paying that higher cost by going to the next unit up.

WITNESS POPE: As we do today, that's

correct.

Q **(By Ms. Jaye)** Mr. Pope, has Gulf modeled the percentage likelihood of gas interruptions per year for the Smith Unit 3?

A No.

Q Is backup fuel unnecessary, in your opinion, because, among other things, the Southern Company system has very little gas-fired capacity and uses mostly coal?

A Yes. Diversity of the fuel is a major plus.

Q If Gulf were to have a backup fuel source for the proposed Smith Unit 3, what type of fuel would Gulf choose with both the commodity and storage, and how much backup fuel would be stored? And for that I'd like the number of days burned at the 100% dispatch.

A I believe the basic assumption would be No. 2, low sulfur No. 2 oil, with a three days tankage at 100% dispatch.

Q Mr. Pope, would you please refer to Staff's composite exhibit, which has been identified as Exhibit 7 on Page 31. This is Gulf's response to Staff's Interrogatory No. 35. I'll give you moment to take a look at that. (Pause)

A Okay.

Q Given Gulf's response to this interrogatory, if a backup fuel source were to be required by the Commission, would Smith Unit 3 still be the most cost-effective alternative available to Gulf?

A Yes, it would.

Q Has Gulf prepared a contingency plan in the event that the fuel supply is interrupted to Smith Unit 3?

A Repeat that again, please?

Q Has Gulf prepared a contingency plan in the event that the natural gas fuel supply is interrupted to Smith Unit 3?

A No, we haven't.

MS. JAYE: I need just a moment. (Pause)

COMMISSIONER CLARK: Mr. Pope, you may want to kick this to somebody else, but can you sort of explain why Smith Unit 3 was so much less than the other alternatives turned in with the RFP process?

WITNESS POPE: I believe Ms. Burke would probably be the best one to answer that. She's the one that did the analysis and knows most intimately the results of the RFP process.

COMMISSIONER CLARK: You would have no information about the RFP process? You sort of just put your bid in and they analyzed all the bids.

WITNESS POPE: I personally was still involved very much -- and still am -- involved in the whole process. But as far as the details and evaluation, the analysis, Ms. Burke would be the best. And I think she would be best to direct those questions to. I'd be glad to try and answer --

COMMISSIONER CLARK: I was wondering if it had anything to do with transmission because some of them were in Hardee County.

WITNESS POPE: Oh, yes. Yes.

COMMISSIONER CLARK: Hardee County is down in the middle of the state, right?

WITNESS POPE: With regard to transmission aspects, I'd be glad to answer any of those because that's -- basically I was in charge of directing the people at Southern in transmission planning to provide her with those numbers where those alternatives were evaluated. Yeah, I'll answer transmission questions.

COMMISSIONER CLARK: I'm just wondering. I mean, the next lowest is $200 per kilowatt more than yours; not quite twice as much. Do you have any feel for why they came in so high?

WITNESS POPE: Transmission is a portion of it, but I believe -- and Ms. Burke really is the best one to answer this -- she can tell you relatively

which was more of a factor than others. But transmission was a factor in all of the alternatives.

Q **(By Ms. Jaye)** Mr. Pope, Staff is going to ask for a late-filed hearing exhibit detailing a contingency plan in the event that there is an interruption in the natural gas fuel supply to Smith Unit 3. If we could identify that as an Exhibit 9, as Late-filed Hearing Exhibit 9.

WITNESS POPE: Let me just ask a question. Beyond what the normal unit operations would be, because I'm trying -- I'm going to answer this just exactly where we break from -- there is no contingency plan other than what our planning criteria outlines, and that is under a unit out, which could be this unit, and a transmission line, the system is still okay. The grid is still intact and operating at acceptable levels. That's not a specific contingency plan but it's our contingency plan of sorts. Beyond that, I'd like to know what more that you'd like.

Q Is that the plan that Gulf would rely upon should this unit go down because there isn't a natural gas supply coming into it?

A Absolutely.

Q If you could provide that in writing then for us as a late-filed hearing exhibit.

MR. MELSON: Chairman Garcia, the witness essentially has said "This is everything I have that would go on a contingency plan." I don't know what benefit we get by having that written down. I don't believe -- based on what I heard him say, I don't believe he has anything to add beyond what he's said up to this point.

CHAIRMAN GARCIA: Ms. Jaye, what are you looking for?

MS. JAYE: This information was requested by Mr. Bob Trapp and he felt it would be necessary to have something in writing for the record. However, if having it in the transcript, as we have today, is under sworn testimony, would be fine for him -- and I'm getting a nod from the back of the room, from Mr. Tom Ballinger that that would be fine, then I'm willing to move on.

COMMISSIONER JACOBS: Let me suggest this, I think it would be useful to have a scenario analysis. And that scenario analysis would essentially look at the present fleet, Southern Company fleet, and how it would be dispatched in this event that we are -- contingency event. I assume -- and you can make whatever assumptions you think are reasonable -- but I think it would be useful to have that kind of scenario

analysis, if we could get that.

WITNESS POPE: To understand that, what you're speaking of, Commissioner, is a before-and-after picture of the Southern generation system.

COMMISSIONER JACOBS: In the event of --

WITNESS POPE: Before -- Smith 3 running is a before case, and then Smith 3 off-line as a secondary case, with everything else remaining the same, except the generation, to see how the generation changes.

COMMISSIONER JACOBS: Let me make sure. Did that come out to what you think we're looking at here?

MS. JAYE: Yes. That the interruption would have to be because of gas supply being interrupted.

COMMISSIONER JACOBS: Does that fall into that?

WITNESS POPE: Gas supply -- this unit being interrupted --

COMMISSIONER JACOBS: The reason for it being off-line is a gas supply interruption.

MS. JAYE: I was going to say, another incident like they had down at Perry last year when the lightning strike caused the total interruption -- for whatever reason, gas is not getting into the unit;

a before-and-after picture.

MR. MELSON: Commissioner Jacobs, could I try to ask a couple of clarifying questions? I'd like to avoid a late-filed exhibit unless it's necessary. Obviously, if it's necessary, we'll do whatever you all need. Could I ask a clarifying question or two at this point?

CHAIRMAN GARCIA: You're going to ask --

MR. MELSON: To the witness --

CHAIRMAN GARCIA: Okay. Why don't we let Ms. Jaye finish, and then you can come back to that. I think -- are you finished?

MS. JAYE: Yes, with that particular set of questioning. I'm not finished with questions by any means for this witness.

CHAIRMAN GARCIA: Let that distill in our mind as well as everyone else's what exactly they are asking for. Let's finish with Ms. Jaye's questions and we'll come back to this.

MR. MELSON: I just don't want Commissioner Jacobs to lose track what it was he was asking for.

COMMISSIONER JACOBS: Sure. I'll try to keep track. If we can take care of it on redirect, then that's fine.

MR. MELSON: Okay.

Q **(By Ms. Jaye)** Mr. Pope, is the Smith site physically capable of handling backup fuel tanks, i.e. is there enough land there to handle backup fuel tanks?

A There's enough land but there would be some permitting and, probably, wetland mitigation that would be gone through that we had not planned for, anticipated.

Q Based on Gulf's view of its gas contract, could gas be diverted to serve residential load during severe weather either in Florida or elsewhere in the United States?

A All natural gas transportation contracts can be curtailed under the federal curtailment plan for residential or end use. So, yes, this one could, just as anybody else's could.

Q I ask you now to please turn to Page 45 of Staff's exhibit which has been marked as Exhibit 7.

A I've got it.

Q Looking at this entire Study for this question, this is Gulf's response to Staff's Request for Production of Documents No. 21. Was this document used to justify the Company's selection of the 13.5% system reserve margin?

A That's correct.

Q Which factors ultimately led to the selection of 13.5% as the optimum system reserve margin for Southern Company?

A Overall, the reserve margin is intended to cover the events of unexpected outage of units or forced outages; abnormal weather conditions, which usually indicates there would be a higher demand than expected, and forecast error. Forecast error is to cover errors out in the long term; beyond two to three years out. Because when the forecasts are made, that's the best estimate.

Your reserve margin is intended to cover you for those events. The Southern electric system, in its methodology of looking at the cost of putting in generation to avert these events, as well as the cost of what it would cost to lose the customer load, balances those two to come up with the 13.5% as its optimum target reserve margin.

Q Mr. Pope, as you may know, most of Peninsular Florida's electric utilities use 15% as the reserve margin criteria. What are the reasons that the Southern Company can plan its system on a smaller reserve margin?

A There are physical and geographical

differences between Peninsular Florida and the Southern electric systems, as was other systems. There are other economic drivers for a system over another system. There's a difference in the forced outage rates of units in various systems. There's -- another factor is tie assistance, I mentioned that earlier. And that's the availability of tie lines with other units which Peninsular Florida does not enjoy the variety that the Southern electric system -- there are a number of factors that are different. I believe even our methodologies and the way we look at the factors we look at are different.

Q Does Gulf Power Company have its own stand-alone planning criteria?

A Yes.

Q Could you please describe that criteria?

A For generation?

Q For deciding reserve margin criteria.

A Our overall reserve margin is driven by the Southern Electric Reserve Margin Target, but Gulf itself -- to give you an example, the Southern Reserve Margin Target is 13.5%. But because of hour-by-hour diversity and the way the total electric system adds its hour-by-hour loads up, that requires Gulf to maintain a 12.6% reserve margin in turn, as the Gulf

system alone, but that translates to a Southern electric system reserve margin of 13.5% because not all companies peak in the same hour.

Q Does this mean that Gulf plans its own system additions to meet the 12.6% individual utility reserve margin?

A That is correct. That is what we consider a reasonable share of the Southern Electric System Target.

COMMISSIONER CLARK: Is that what you considerable a reasonable share or what Southern Company System considers your reasonable share?

WITNESS POPE: It's both. We all agree that is a reasonable share because of diversity. We all agree at Southern Operating Companies to the 13.5% target. It mathematically translates to 12.6.

COMMISSIONER CLARK: Let me ask you a question: Do you happen to know what the target reserve margin has been for, say, the last five years?

WITNESS POPE: Up until 1999, the target reserve margin for planning purposes has been 15%. But back in '97, when this document, this Reserve Margin Study was conducted, at that time the conditions determined that a 13.5% reserve margin target was sufficient. As was mentioned in the Need

Study, we are reevaluating that at this time.

COMMISSIONER CLARK: Let me ask you, from up until 1997 it was 15% reserve margin, or could we say that's in the reserve margin, say, since 1985?

WITNESS POPE: I can't say for '85, but I can say from '89 on for sure. For ten years.

COMMISSIONER CLARK: And you have no explanation as to why the 13.5% was decided on. What were the factors? Was it your units are running better -- what do you call it -- load factor?

WITNESS POPE: Equivalent forced outage rate is lower a little bit in the study results. The economics of the cost of expected unserved energy or the cost of a customer's outage were lower in the 1997 study than they were in the previous year's study.

COMMISSIONER CLARK: Explain that to me. The cost to the customer of the outage was lower so that you decided -- the economics said it's worth it to carry less on our reserve margin?

WITNESS POPE: When you balance the cost of putting in generation with the cost of -- a perceived outage of a customer would be, if the economics are driven in that direction, then the curve comes down to a lower reserve margin level.

That's one of the major factors of why we're

re-evaluating now, is because we're finding that the market conditions have changed since 1997 to where the cost of providing that unserved energy, or for avoiding that unserved energy in the marketplace are a little higher, which drives your curve to the right, upward a little bit. But in that year, yes, the conditions --

COMMISSIONER CLARK: How do you determine the cost to the customer for not getting electric services?

WITNESS POPE: By survey. It's the same survey methodology that was employed by Duke and by Florida Power Corporation in their what they call the Societal Cost of Outages Studies -- back in the late '80. Where you go and you ask customers two questions. One question is "You're going to be outaged for one hour at 5 p.m. on a Friday afternoon, hot summer day. The question is: How much would you pay us to not outage you for that one hour? Or how much would you be willing to accept from us to be paid for that outage?" You get a number of answers in that bracket and you come up with what is the cost of that outage to the customer.

COMMISSIONER CLARK: So if electric prices go high enough, then you might have no reserve margin.

WITNESS POPE: If electric prices go -- that's correct. The customer would say, "No, I'm not willing to pay anything."

COMMISSIONER CLARK: And you rely on their statement that "I won't pay any more than that," or "I'm okay with you interrupting me if it's going to me cost X amount."

WITNESS POPE: Well, Commissioner, without getting into details of the survey document, or survey study, just on a broad basis, if you can think about those two questions, yes, the answers could be widely different.

What I'm willing to pay you to avoid that outage was very small. Because I'm supposed to get power from you anyway. Yet how much would you be willing to get paid by the power company to accept the outage? "Well, I want to you pay me $1 million." You have to bring those down into reality as to what really happens.

I'm not an expert on how they do all of this stuff, but the company that was employed, that I mentioned earlier, they are widely regarded as one of the experts in the field to determine this information.

COMMISSIONER CLARK: Are you saying a

primary driver of it coming from 15% down to 13.5% is what customers would pay?

WITNESS POPE: No. It's combination of things, Commissioner. One of the assumptions in the early studies was the mix or the blend of customers that would be outaged; that would actually be taken off-line if there were no power available and you needed to drop customer load. That had an allocation of classes: Industrial customer, commercial and residential. One of the factors is, is that it was determined that really you would not, probably, interrupt any industrial customers -- or very few. You would probably not interrupt --

COMMISSIONER CLARK: Was it 13.5%?

WITNESS POPE: No, ma'am. No. But let me just summarize it. The allocation of the -- allocation of customers that would be outaged -- the assumption of allocation of customers that would be outaged in the previous 1994 study changed to a more residential interruption strategy.

The residential customers are the lowest cost from a customer outage standpoint. To give you an idea of what their relative ranking compared to commercial, a residential customer would say "It's $2 a kilowatt-hour if you interrupt me." Relatively a

commercial customer would say "It's $8 a kilowatt-hour to interrupt me because of lost sales." It's less costly to interrupt residential customers. It was also felt since it's less costly and less pain, that that's who would get interrupted more often.

That changed your assumptions in the '97 study which drove your cost of outages down a little bit. When you drive your cost of outages down, it says you don't need as much capacity.

COMMISSIONER CLARK: That's my question. Is that the primary driver of bringing the 15% down to 13.5?

WITNESS POPE: That's the primary driver of that assumption -- of that result.

COMMISSIONER CLARK: Okay. 1.5% in the reserve margin. What is your loss of load probability with that?

WITNESS POPE: Commissioner, we don't use loss of load probability, we use expected unserved energy, which is driven by loss of load hours but not loss of load probability.

COMMISSIONER CLARK: So your expected unserved energy will be higher under the 13.5 than the 15%; is that correct?

WITNESS POPE: That's correct.

COMMISSIONER CLARK: Is this the first time we've used that survey in determining what the reserve margin should be?

WITNESS POPE: I don't believe so, Commissioner.

COMMISSIONER CLARK: When did you start using it?

WITNESS POPE: 1990, I believe.

COMMISSIONER CLARK: Thank you.

Q **(By Ms. Jaye)** Mr. Pope, if you would, please, turn to Page 97 of Staff's Nonconfidential Exhibit No. 7.

A I've got it.

Q Well, there's a graph in the middle of the page entitled "Optimum System Planning Reserve Margin Minimum Cost Calculation 13.5%, Three-year Lead Time." Could you please explain this curve and what it means?

A The curve represents the summary of both the cost of customer outages and the costs of generation to avoid those outages. On this particular graph in black and white the darker bars to the left representing -- particularly the first one, represents the total cost of outages with no generation additions to forgo those outages. And as you move towards the right, you'll see a linear extrapolation of bars, or

shades, that represent the cost of generation additions. And when you -- corresponding to those, generation additions would be less expected unserved energy, therefore, your cost goes down.

When you add the two together, that results in the resulting bar representation costing.

COMMISSIONER DEASON: Is this graph -- is it hypothetical or these are the actual results of the Study?

WITNESS POPE: Those were the results of the Study.

COMMISSIONER DEASON: It would show then there's really not much incremental or significant change within the range of 13.5% up to 15%? Although -- in other words, those columns look to be about the same height.

WITNESS POPE: That's correct.

And you can look -- from another standpoint, Commissioner, you're correct, the slope or increase of the curve toward the right is far less than to the left.

Q **(By Ms. Jaye)** How much capacity will Gulf Power need in its system in 2002 to meet the reserve margin or reliability criteria, the 13.5 on the Southern system and 12.6 on the Gulf system?

A 427 megawatts.

Q Is this 427 megawatts needed to satisfy the 13.5% reserve margin criteria set by Southern?

A That is 427 megawatts to bring Gulf's reserves to 12.6, which mathmatically apply to the 13.5%.

Q How much new capacity does Southern Company have to add typically each year in order to satisfy its reliability criteria?

A If it were to add it every year?

Q Yes.

A It's in the range of 25 to 30 megawatts of growth a year and demand.

Q How much new capacity does the Southern Company system typically need to add each year to satisfy its reliability criteria?

A I believe it's in the range of 600 megawatts a year.

Q And this question is for clarification. Among the Southern Company member utilities, is it now Gulf's, quote, "turn" to add capacity because it is the primary driver for Southern's 2002 capacity needs?

A I wouldn't characterize it as Gulf's turn. It's just that there are not other available either purchases or temporary excesses on the Southern

electric system which Gulf can rely upon to meet its reserve requirements.

If other companies were adding capacity already, and had -- there were some temporary excesses of 30 megawatts here and there, and Gulf could possibly rely on that other than adding a unit -- but it's come to the point where we've purchased, in short term, as much as we have. Those things run out at the end of 2001. Other companies are in the same boat. Other Southern electric system companies are in the same boat. What's available out there is more expensive and less available, so all companies are having to add. Gulf is just one of them.

Q How does Southern Company members share system reserves? How are they allocated? And which utilities are the primary suppliers of these reserves?

A I believe -- could you ask the question again? Because when asking a question of allocating reserves, there's mechanisms -- I think Mr. Howell would probably be best to answer this one, because it may get into the intercompany interchange.

From a operational standpoint, the system is essentially just by Southern pool, so to speak, and on a day-to-day basis there is no allocation -- from a planning aspect there is. If that's the question,

then ask me from that aspect.

Q Do the larger member companies of the Southern Company system provide most of the system reserves?

A In past years that has been the case because larger companies end up adding larger units. Gulf being a relatively small member of the Southern electric system, with only a growth of 25 to 30 megawatts, it's not economically realistic to add those kind of megawatts and increments every year, whereas a Georgia Power Company or an Alabama Power Company, adding larger units has occasionally a 30- or 40-megawatt reserve excess in a year or two, a temporary excess, that us, smaller companies, can rely upon, until they grow in it or until other things avail -- such as the situation in 2002, where we need to have an economic batch of electricity.

Q Are those excesses in capacity in the bigger companies, such as Georgia Power and Alabama Power, allocated such that each member utility will be able to maintain its 12.6% reserve margin?

A In the planning arena, yes. When you look at what -- on a plan basis, capacity resources are planned to be installed and what loads are with the various companies. If there is an excess, a temporary

excess that year, one company being long -- for instance, let's assume that Georgia Power Company were long 150 megawatts, you would look at the other operating companies that have less than their optimum portion of the Southern electric system reserves and it would be allocated on need. After that's done, if there's still more need, everybody would decide on what's the best way to add to the Southern System reserves.

CHAIRMAN GARCIA: Let's take a break. We're going to take a -- do you need a quick break? Take lunch or --

MS. JAYE: 30 minutes will be sufficient.

CHAIRMAN GARCIA: Let's take lunch. Let's go to 1:00:

(Thereupon, a lunch recess taken from 12:15 a.m. to 1:00 p.m.)

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(Transcript continues in Volume 2.)

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